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Editor: Douglas G. Woolf

Joseph H. Bragdon

JOSEPH H. BRAGDON, publishing director of TEXTILE WORLD, died suddenly of pneumonia, Wednesday of this week, at his home in New Rochelle, N. Y., in his 43rd year. He had been taken ill Tuesday, Feb. 11, a few days after returning from a trip through the textile districts of New England.

In addition to being publishing director of TEXTILE WORLD, Mr. Bragdon was a member of the executive committee and of the board of directors of the McGraw-Hill Publishing Co. He was also vice-president and general manager of the Bragdon, Lord & Nagle Co. Division of the McGraw-Hill Publishing Co.

Mr. Bragdon was a past president of the New York Business Publishers Association and also a past president of the Associated Business Papers, Inc., the latter being the highest honor the business publishing profession can confer.

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Born in Melrose, Mass., June 9, 1887, Mr. Bragdon had publishing as his heritage. His grandfather published a weekly paper in Newburyport, Mass. His father, Joseph H. Bragdon, founded *Textile Manufacturers Journal* in 1894 and became one of the outstanding figures in the textile field. The latter died in 1905 and his son, after graduating from Hotchkiss School and Yale University, joined the staff of the

Textile Manufacturers Journal in 1911. At that time the paper was published by the firm of J. H. Bragdon & Co., which was composed of men who had been associated with Mr. Bragdon, Sr., during his life.

The son's entrance into the business was typical of him. As the head of the Bragdon family, he was naturally regarded as a personage by those in the company and some hesitancy was felt about discussing the matter of salary with him. Finally one of the staff was delegated to make the financial arrangement and, after considerable embarrassment, asked young Bragdon how much he would expect. The latter, in turn, asked how much he ought to get, and the suggestion of $25 a week was made. Mr. Bragdon then asked if the firm would pay that much to any other young man just out of college, and after receiving a hesitant negative, fixed his own salary at $15 a week.

He made his way through all departments of the publication, finally becoming treasurer of Bragdon, Lord & Nagle Co., the firm which resulted from a merger, in 1915, of Lord & Nagle, publishers of *Textile World Record,* and J. H. Bragdon & Co., publishers of *Textile Manufacturers Journal.* The two papers were combined into the *Textile World Journal* which was later shortened to TEXTILE WORLD.

He was active in the rapid growth of the new company which absorbed *Posselt's Textile Journal* in 1923 and *Textiles* in 1924, both being merged with TEXTILE WORLD.

When, in 1928, TEXTILE WORLD became affiliated with the McGraw-Hill Publishing Co., Mr. Bragdon was appointed publishing director of TEXTILE WORLD and, as such, was directly responsible for the publishing policies of the paper.

Despite the arduous duties which his work on TEXTILE WORLD placed upon him, Mr. Bragdon found time to take a most active part in all cooperative efforts of business publishers. During his administration as president of the Associated Business Papers, the entire scope and activities of that association were reorganized and a broader program initiated. At the time of his death he was also a member of the board of governors of the Advertising Federation of America.

In 1911, almost immediately after his graduation from Yale University, Mr. Bragdon married Emily Kaltenbach. He is survived by his widow and two sons, Joseph, Jr., a junior at Hotchkiss School, and Ernest, a senior at Rumsey Hall.

Mr. Bragdon was a member of Publicity Lodge 1000, F. & A. M., New York; D. K. E. Fraternity; the Advertising Club and the Yale Club, both of New York; Wykagyl Country Club, New Rochelle, N. Y.; Elihu Club, New Haven, Conn.; American Yacht Club, Rye, N. Y.; Revel Island Club, Wachaprague, Va.

Private funeral services will be held today (Saturday) at his home in New Rochelle. Interment will be in Greenwood Cemetery, Brooklyn, N. Y.

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Mr. Bragdon was not only an able publisher, but, far more important, he was a great friend. Few men possess the combination of a personality which attracts friends and a character which holds them, to the degree that he did.

His mind was thorough and analytical—and yet quick and decisive. His sense of humor and his thoughtfulness of others were unfailing.

To his co-workers on TEXTILE WORLD and to his fellow publishers throughout the industry, he was a delightfully refreshing companion who always had a new joke on tap—and yet a brilliant publisher whose judgments were consistently sound.

He was "Joe" to his subordinates as well as to his fellow executives.

Every member of the TEXTILE WORLD staff, as this is written, is thinking not of the fact that their publishing director has gone, but that "Joe" has gone.

The Week in Textiles

Outlook . . .

LITTLE change is looked for in the immediate future and markets should be fairly steady. . . . . Some increased activity may develop in wool goods with cotton goods experiencing flurries as raw cotton changes, but the latter should move over smaller range. . . . . Some time will be required to work out unsatisfactory conditions in hosiery. . . . . Raw Silk Exchange had record volume on Wednesday.

New England! . . .

FEELING that their strength and influence should be lent to the movement so ably sponsored by the New England Council, next meeting of Southern New England Textile Club, to be held in Providence, Mar. 15, will be devoted to "New England." . . . . Speakers will concentrate their attention on presenting all phases and conditions of the section as a whole. . . . . Ex-Governor R. O. Brewster of Maine will make the principal address to a group including such distinguished guests as Governor Norman S. Case of R. I.; Redfield Proctor, president, New England Council and Ex-Governor of Vermont; Dudley Harmon, executive vice-president, New England Council; Lincoln Baylies, president, National Association of Cotton Manufacturers.

N. Y. Cotton Delivery . . .

BOARD of Managers, New York Cotton Exchange, call meeting Feb. 24 to consider elimination of 35 point differential on southern delivery. In event of final approval first new month to be traded will be October with old contract expiring Jan. 31, 1931. . . . . Originally when New York was great spot market, contracts called for N. Y. delivery only. Later, when southern mills became large users, expense of N. Y. delivery and reshipment was used for manipulation. In 1928 southern delivery was allowed for, but 35 point differential was added for N. Y. delivery.

Wool Grease . . .

HIGHER duty on wool grease might be more to the liking of millmen than higher duty on wool. A mill having a nearby stream or river for its effluent is fortunate, but when a State or County insists on purification of waste liquors, expensive plants, some of them requiring much land, have to be provided. . . . . A manufacturer said recently that he was about breaking even on his grease recovery while another wool scourer, using a mechanical method of recovery, stated that during the past three years he had made a profit of $1,000 annually. . . . . Imports of cheap Degras (wool grease) from England and the Continent depress prices for the domestic product. Imports for the eleven months of 1929 totaled 10,253,000 pounds at an average price of 3½c. per pound.

Oppose National Wool Marketing . . .

ACCORDING to report received from Texas, opposition has developed from warehousemen and some wool and mohair growers against National Wool Marketing Corporation, created under auspices of Federal Farm Board. . . . . Meeting held during week-end produced hostile sentiment and statement was made that growers have not been flocking to cooperatives. . . . . Report that Boston wool houses are offering to make pre-shearing advances equal to cooperatives and to handle as cheaply. . . . . Further developments expected.

On Cotton . . .

EXTRACTS of letter from Carl Williams, member, Federal Farm Board, to representative C. H. Brand of Georgia: "Within the last 20 years world consumption of cotton, outside of the United States, has increased about 60%. During that period our exports of raw cotton have stood still. Foreign growths have gotten the increased business. Soviet Government last year raised 1,230,000 bales, of which more than 90% was inch and 1⅛ in. . . . . Two-fifths to one-half of India's total production is good ⅞-in. or better. Staple of American cotton has tremendously deteriorated. United States is past the danger line on quality of its cotton, and on its acreage. A yield equal to 1914 on acreage of 1929 would have meant 22,000,000 bales. The quality of cotton should go up and the quantity down."

It Pays . . .

BASED on percentage of sales, it costs the jobber about four times as much for warehousing as it costs the chain store. . . . . Antiquated methods is the answer revealed in study made by Foodstuffs Division, Department of Commerce. . . . . Moral is to modernize your warehousing methods as well as your mill.

Guests . . .

TOUR of American textile plants will be made by party of 20 Dutch cotton manufacturers leaving Rotterdam April 10. . . . . One week will be spent in New England, one week in cotton growing States, and about ten days visiting general in-

dustrial plants. . . . . Netherlands-American Chamber of Commerce, sponsors of trip, have considered plans for two years.

Want Lower Silk Rates . . .

SEATTLE, WASH., is making a determined effort to have transcontinental railroad freight rates on silk reduced. . . . . Figures will be laid before meeting of railroad freight traffic managers in Chicago, May 3, showing a $6 per 100 lb. differential in favor of Panama Canal route. . . . . Seattle wishes differential reduced to $3.

Cotton Consumption Rises . . .

JANUARY consumption of cotton, 577,235 bales, was 123,343 bales above December consumption, but still 91,000 bales below January, 1929. . . . . Total was greater than for any month in last seven with exception of October. . . . . Stocks on Jan. 31, were 7,236,867 bales; consumers holding 61,931 bales more than year ago and warehouse and compress total being 791,459 bales higher. . . . . Exports for six months off 685,712 bales.

Wool Stocks at Low . . .

STOCKS of wool, foreign and domestic, all classes and conditions, held by manufacturers as of Dec. 31, 1929, amounted to 147,433,000 grease pounds as reported on this page last week and were at the low point for the last eight years. . . . . These figures cover about 85% of the industry which percentage of mills reporting has been unchanged.

Individual Drives . . .

"THE present tendency is strongly toward individual motorization, particularly as far as looms are concerned, and this change is among the major developments in cotton manufacturing," said John F. Reardon, agent of the Grosvenor-Dale Co., speaking at the Textile Forum, under auspices of National Association of Cotton Manufacturers. . . . . The increased use of the individual drive was indicated by the fact that during the period 1899-1927 the horsepower per motor decreased from 62.0 to 7.7.

Wool Weaving . . .

ADJUSTED to a 6/4 basis, December production in the wool weaving industry decreased about 1,000,000 yd. from November to 9,017,402 yd. . . . . While the percentage of decrease is greater than that of the December-November, 1928, period, the fact that a further decrease would have been helpful is revealed by the fact that stocks on hand in excess of orders were 5% greater at the end of December than at the end of November. . . . . Billings for the month were better, 9,661,114 yd., representing a gain of 1,300,000 yd. . . . . Production, billings and stocks were all less than December, 1928. Figures are from the Wool Institute.

Large 1929 Wool Consumption . . .

WOOL consumption for 1929 was greater than it has been since 1923. . . . . Figures compiled by Department of Commerce show 585,558,001 lb. (reduced to grease equivalent) used in 1929; 538,354,229 lb. in 1928; 551,528,052 ib. in 1927. Increases were principally in fine and carpet wools. . . . . There was a sharp decrease in consumption for December, 1929.

Cotton Goods In and Out . . .

A TOTAL of 48,863,211 sq. yd. of cotton cloth were imported during 1929, according to the Department of Commerce, a decline of about 2,200,000 sq. yd. when compared with 1928, but total value remained about the same. . . . . For 1929 exports: 564,448,789 sq. yd., an increase of 18,000,000.

Set Date . . .

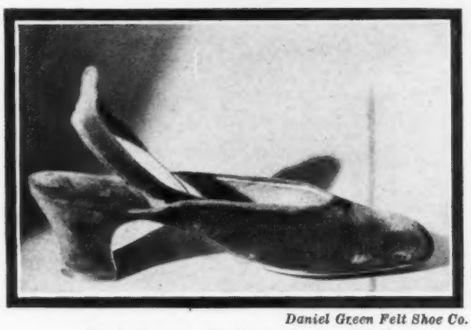
TRADE practice conference of cotton converters industry, previously authorized by Federal Trade Commission as reported, is now scheduled for Thursday, Mar. 15, at the Martinique Hotel, New York.

Herbert Photos, Inc.

The Gloversville Knitting Co. Caters to a Flying Clientele and Shows Its Products at New York Aviation Show

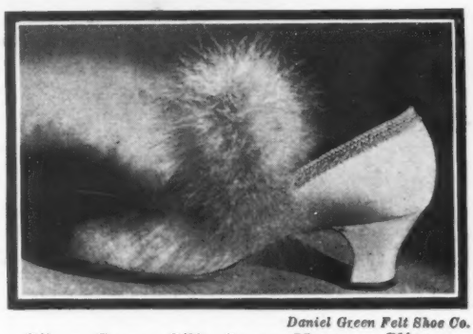
Colella & Leighton Shoe Co.

New Tweed Linen Spectator Sports Tie; Green Luster, Kid Trim



Daniel Green Felt Shoe Co.

Red Panne Velvet Strap Mule



Daniel Green Felt Shoe Co.

Silver-Green Silk Crepe Hostess Slipper

The Onward March of Fabric Footwear

By Helen M. Haney

FABRIC footwear production is increasing. Department of Commerce figures for 1928 showed an output of "3,760,069 pairs of canvas, satin, and other fabric shoes (exclusive of footwear with rubber soles), an increase of 13.9% over that of 1927." The increase in the total footwear production of 1928 was less than 1%; the increase in the output of women's leather shoes was but 6.4%, being the next highest to the mark made by fabric footwear. One very successful New York shoe fabric house, which specializes in "all of the new things," estimates that its business on yard goods advanced more than 100% in the last five years. Production figures for 1929 have not yet been compiled, but so insistent is the present demand for fabric shoes for house wear, for spectator sports, and for evening, that 1930 promises to be one of the biggest and best years on record for footwear uppers of textiles.

Women Fabric-Footwear Conscious

Women have become fabric-footwear style conscious during the last few years. They are particularly impressed with the appropriateness of fabric footwear in this period of femininity in apparel. For fabric footwear is the perfect complement to the new dainty vogue of gowns of lace or silk, with their long flowing lines, frills, and flounces. The boyish mode has gone, and in place of the masculine sister of yester-year, 1930 is ushering in "the grande dame."

Fabric Shoes Show Big Profit

Progressive merchants are selling fabric slippers the year round. Until within the last year, shoes of this type were considered as a holiday seller, almost exclusively. But now, the fabric slipper is sold as that profitable "extra pair" for every one of the five classifications of clothes decreed by Dame Fashion for the well-dressed woman: Morning, afternoon, evening, informal, and hostess costumes.

Shoe manufacturers have been very alert to the possibilities of fabrics for the 1930 seasons. They are more interested in what is being done in fabrics than in any other shoe material, because fabrics show a big profit to both the manufacturer and the retailer. A high-style fabric can be bought for one-half as much as a high-style leather, and cuts to better advantage, with less waste. Of all the various shoe fabrics, shoe manufacturers have found that satins and velvets cut to the best advantage. For instance, three to six pairs of fabric

Fabric Bags Strike a New Style Note. Here is one in Brocade with Shoe to Match

This Tie Is in White Linen with Matching Envelope Bag

Courtesy of I. Miller & Sons, Inc.

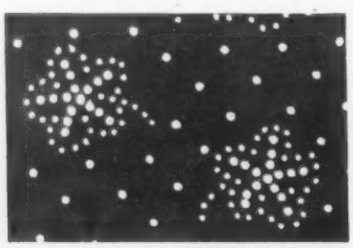
shoes (in many cases trimmed with kid) may be cut (on the stretch, not the bias) from one yard of 36-inch-wide goods.

Fabric slippers may be divided into three general classifications: The house slipper; the spectator sports slipper; the ball room slipper. The use of the many, varied kinds of fabrics in these slippers depends upon the costume. In the first-named classification, the pajama slipper appears in the foreground. The pajama fad has tremendously increased the consumption of fabric footwear. The fashionably garbed woman of 1930 wears pajamas around the house from morning to night—a different one for each activity of home life—and for each pajama costume, there is a complementing pajama slipper of fabric. Fabrics for the house slipper, in the order of their predicted importance for 1930, are: Crepes, moires, plain satins, brocades (including paisleys), velvets. Velvets are expected to appear in a new prominence this year as a house-slipper fabric. The kitchen and garden pajama shoe is of canvas or of linen.

Spectator sports use of fabric shoes is growing as fast as is the popularity of "the game". Among the new numbers under this heading are the "tweed linens", which closely resemble a wool tweed, but as to looks only, as they are as cool as any other linen. Shoes of tweed linen are usually "high-lighted" with a kid trim in one of the fabric's dominant colors. Another new fabric which every shoe manufacturer of women's footwear is either sampling, or ordering, is lintong, which has a linen body, and a shantung sheen. Visca, a cool and crisp summer fabric of 1930, has a shiny, straw-hat effect; it lends itself well to embroidery, and combines well with luster kid trims.

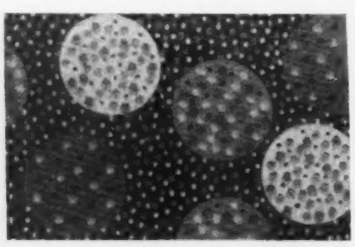
Fine linen cloths, in both pure white and natural shades, are often decorated with hand-painted motifs, the fabric being so constructed that it is possible to dye the background without obliterating the colors or the form of the design. A very effective shoe recently noted had a billiard ball design, developed in the Palm Beach shades of soft green, yellow, red, and heliotrope; this decoration appeared on the vamp, and again on the covered heel.

Under the heading of spectator sports may also be mentioned the lovely *printemps-racquel* lace, in black and white, and in other duo-tones; also damasks, crepe linens, basque linens in hand blocked figures with two or three colors featured in the motif; *broiderie de fleur*, an embossed floral effect appearing in shades of maize, tan, blue, on a natural shade of linen. This latter fabric was recently shown in a charming combination with green moire as an eyelet tie. A Venetian cloth (a knitted fabric) has been developed as a 1930 seller in black and white, and in a green, blue, and gold weave. Still another new



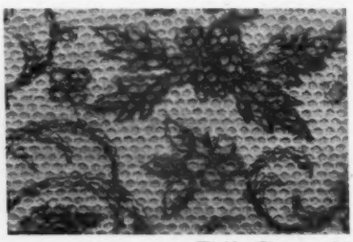
Winkler-Thompson Co.

New Black Satin Metallique



National Fabric & Finishing Co.

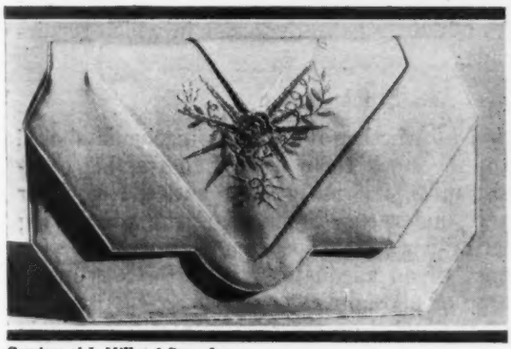
Silk Print in Brown and Green



Winkler-Thompson Co.

Printemps-Racquel Lace

A Pump in Black Moire with Its Complement in an Envelope Pouch Bag



Courtesy of I. Miller & Sons, Inc.

Bag and Pump, Both in the New Lintong Fabric, Match Also as to Embroidered Motif

fabric is a horsehair linen, featuring tan, natural, green, and maize shades.

Enter Satin Magique and Metallique

But the most novel fabrics of the 1930 season are the new crepe or satin magique, in white or black backgrounds, adorned with numerous pin-head dots or triangles in gold or silver; and the black or white satin metallique. A very lovely pattern in the last-named fabric showed closely clustered silver dots simulating small flowers. The black satin magique is predicted as a stylish street shoe fabric for fall. Both the magique and the metallique have dyeable backgrounds, the motifs unaltered. Reptilian effects are also produced on satin, or crepe, magique.

Silk prints for shoes, in keeping with the vogue of prints for dresses, are entering the 1930 fabric footwear season with a new degree of prominence. There are many black and white effects, as well as harmoniously contrasting and blending colors. Print designs are either floral, lace-like, or geometric. The beiges, browns, greens, corals, yellows, off-whites, pure-white, pinks, purples, blues, and reds, appear in various combinations of colors. One shoe manufacturer interviewed places tweed linen as his "best bet" for 1930 spectator sports; lintongs, next, and basket weave linen, third. He believes that he will sell a few colored linens, but pure white will be best.

In the third classification of fabric footwear—"for the ballroom"—is silk crepe, in some dominant color of the gown—very often a white crepe which has been dyed to suit the tone-demand of the customer. Satins, moires, metal and brilliant brocades, lames, and panne velvet, are also prominent under this heading. Whereas last year brocades were multi-colored, featuring almost "nine million rainbows," the 1930 brocades are showing only a few dominant colors—for instance, a shoe in rose pink and green brocade, with gold kid piping, pinked and beveled. Often three fabrics, or fabrics and kid, are combined.

Backing Cloths Important

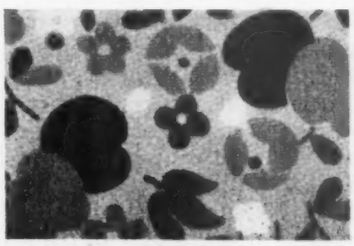
In addition to the hundreds of thousands of yards of fabrics which are yearly converted into shoe uppers, there are also millions of yards of shoe linings, for fabric backing; for the linings of shoes, as well as for laces and binding. For instance, moleskin (which has a nap finish on one side, and a smooth sateen surface on the other) is used to back many of the printed silks; there are backing cloths of twill, as well as of drill. While some of the backings are woven into certain fabrics, the great majority have to be backed. Ninety per cent of the backing is accomplished by the rubberizing method, which is somewhat more expensive than the old pasting method, but which gives better service.

The proportion of imported shoe fabrics to domestic fabrics used by American shoe manufacturers is very

(Continued on page 44)

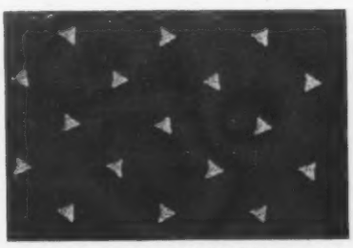
National Fabric & Finishing Co

Silk Print in a Lace Design



National Fabric & Finishing Co.

Another Silk Print for Shoe Use



Winkler Thompson & Co.

Satin Magique; Silver Motifs

Master Mechanics Consider Diverse Problems

CONSIDERATION of mill repair and maintenance problems featured the Master Mechanics' Forum held Feb. 13, at the Boston City Club. This meeting, the fourth of a series held under the auspices of the National Association of Cotton Manufacturers, brought together master mechanics from all branches of the cotton industry. The responsibilities of the master mechanic and his relations with other plant executives were widely discussed. Methods of handling rush jobs, humidification problems, and machine-shop equipment were among the other subjects presented for consideration. Decided opinions were expressed as to the best type of drives for textile machines and as to the desirability of purchasing or making various repair parts.

In discussing whether the master mechanic should be responsible for all motive power, including motors and generators, the members were in quite close agreement that in plants having only a small number of motors the master mechanic might well have supervision of all motive power. In large units, however, it is advisable to have a chief electrician who is responsible for installation, repairs, changes, oiling and cleaning, of all electrical equipment.

A man whose duty is solely to oil bearings on all motors was advocated by one member. By following that system responsibility for oiling may be definitely placed and it is fairly certain that bearings will be oiled at definite intervals. Many suitable oils are on the market, but it is recommended that a high grade oil be used.

MASTER MECHANICS from all branches of the cotton industry discussed problems relating to plant maintenance and repair at a recent meeting in Boston. This description of some of the high lights of the meeting is based on a report issued by the National Association of Cotton Manufacturers, under whose auspices the Forum was conducted.

Handling Rush Jobs

Interest was displayed in the proper measures to be taken in the case of rush jobs due to breakdowns, one member asking whether preference should be given to any particular department of the mill. In gray mills it was conceded that the first consideration is to keep the looms going; this necessitates giving the slasher preference, as this machine controls the supply to many looms; spinning frames likewise should not be allowed to stop; with slubbers, drawing frames, and intermediates some leeway is allowed.

The formalities needed to have repairs made called forth many comments. In large plants where repair requisitions are necessary, some way of eliminating red tape is needed in the case of break-down jobs. One member stated that he has arranged it so that the red tape comes after the job is completed, a telephone call being all that is necessary to send a mechanic to the job immediately.

Another speaker on the subject who favors the requisition plan, said that he employed a special red-tag preference requisition for emergency jobs to give them right-of-way over others.

In order to avoid friction between overseers and the master mechanic it was suggested that the superintendent be vested with authority as to the order in which repairs should be made.

Stock Room

The question of whether the master mechanic should have charge of the stock room evoked contrasting opinions. In most mills, it was brought out, the stock or supply room is under the direction of the purchasing agent; in other mills a storekeeper, who is responsible for the maintenance of an adequate supply of stores materials, has charge of all supplies.

Opinions were divided on the relative merits of single and two-ply belting for looms, some members voicing a preference for $1\frac{3}{4}$-in. light, double belting and others favoring 2-in. heavy single-ply belting.

In the discussion of repair parts for looms one member stated that, on account of the time required to secure repair parts from the manufacturers, he had put in special tools for making some spare parts, but that there were certain parts that he considered it best to purchase. Another speaker agreed that they had found it advisable to purchase some parts, while others they could make themselves at a saving in time and cost.

Humidification

Various humidifying problems were discussed at both the morning and afternoon sessions.

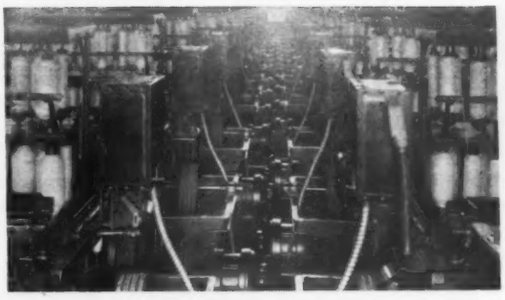
A question of interest was, "When should humidifiers be started in the morning to secure the required degree of humidity at starting time?" While in some mills it is the practice to start the humidifiers at 4 o'clock in the morning to reach the relative humidity desired at starting time, several members had found this method unsatisfactory and were inclined to run the humidifiers continuously, setting them back 5% when the mill was stopped and putting them up to running conditions one-half hour before the mill starts operations. In one plant after a two-weeks shutdown it was necessary to start the humidifiers on Thursday in order to secure the proper condition for the following Monday.

It was pointed out that to secure efficient humidification constant attention is necessary to keep the atomizer heads and strainers clean, and the regulators in proper working order.

According to one speaker, for cotton spinning a relative humidity of 65% was tried, but it was found necessary to reduce that to 55%. For roving frames 50%

was found suitable, while in the picker room humidifiers were not satisfactory.

The degree of relative humidity required in winding rayon was another problem discussed. One member stated that he had never been able to find two rayon men who agree on this matter. Another speaker said that it is apparently the variation in humidity rather than the actual humidity that is harmful.



Texrope Drives

For protection against fire in generators, Pyrene and carbon dioxide were both recommended. A question in regard to how many of the men generating their own electricity have any fire protection inside their generators disclosed that not one of those present was so equipped.

Boilers for Textile Mills

Discussion concerning the best type of boiler for textile mills showed that the tendency is now toward the water-tube boiler for new installations, but that the Manning type, because of its low cost and high efficiency, still has many adherents. Turbine boilers are now running as high as 1,200 lb. and exhausting at 300 lb., but for industrial plants a 350-lb. unit is considered to be the more advisable.

In starting machines in the morning, to prevent overload on generators and (when purchasing power) penalization on demand load, it was agreed that machines should be started successively, so that at no time more than 25 to 30% excess load over the usual running load is required. By starting the large motors fifteen minutes before starting time, the smaller motors—by proper scheduling—may be all started in five minutes.

Repair Shop Equipment

A list of the most essential tools for a mill repair shop compiled from suggestions by several members includes lathes, radial drills, gear hobber, key seater, power saw, high-speed shaper, hydraulic press, and automatic gear cutter.

Drives for Textile Mills

The question of the efficacy of Texrope drives was raised during the meeting, and was the subject of considerable comment. On 3- and 5-hp. drives at 200 or 250 r.p.m. one member stated that he has been running for three years with very little trouble. Another speaker added that he was well-satisfied with this equipment and used it on 25-hp. drives. Other members discussed the use of Texrope drive in dyehouses, on pickers, and for other applications; and it was suggested that it might be used for driving cards. An illustration of the drive in operation is shown above.

Before adjourning it was said that the meeting had proved highly satisfactory and that it was believed that a continuation of similar meetings once or twice a year would be beneficial.

Textile Operations Show Curtailment

By Robert M. Davis

Statistical Editor, McGraw-Hill Publishing Co.

THE first month of 1930 witnessed a very definite upward trend in almost all lines of manufacturing and distribution. The textile industry, taken as a whole, witnessed the small increase in rate of operations of 2.4% as compared with December, but the January rate of operations was still under that reported for January 1929.

Many causes—inclement weather, a late Easter and a widespread sentiment of caution have combined to retard spring business of manufacturers of wearing apparel. The outlook for this branch of the textile industry is not so favorable as for 1929, and it seems probable that many concerns will find it extremely difficulty to cover operating expenses.

In spite of the concerted effort to cut down cotton goods production during the last quarter of 1929, there is little doubt that stocks of goods at the mills are considerably larger than a year ago. There is evidence, however, that buyers' supplies are depleted, and that a greater yardage per garment will be consumed this year. The mills are not operating at any greater rate, but higher quotations are probable. On the other hand the trend to longer dresses is slowly gathering momentum.

That manufacturing in general reached the low point in the present cycle in December, and that a distinct upward trend in activity was recorded during January is indicated by reports on the monthly consumption of electrical energy by manufacturing plants as received by *Electrical World*. The rate of manufacturing operations in the country as a whole during January was 4.6% above that of December, was 8.1% under January last year, but was 2.9% above January 1928. The two key industries—steel and automobiles—both witnessed materially increased operations during January, but current operations in both these industries is still materially under this time last year. It is certain that the average volume of general manufacturing and distribution during the first six months of 1930, will be materially under that during the same period last year. Improvement is probable month by month but it is doubtful if the aggregate purchasing power will reach last year's levels until late in the second quarter at the very earliest.

The Standard Statistics Co. concludes from its studies that with reduced aggregate purchasing power in both agricultural and industrial sections of the country, volume of general sales during the first quarter will fall some 5% under the same period in 1929.

Urges Growing Longer Staple Cotton

GROWING of longer staple cotton on a more general scale is recommended by Henry P. Kendall, president of The Kendall Co., in the following letter sent recently to Governor Richards of South Carolina:

Governor John G. Richards,
State of South Carolina,
Columbia, South Carolina.

My dear Governor Richards:

There is a real opportunity to help South Carolina farmers, to benefit the textile industry in the State, and to increase the agricultural wealth and prosperity of the State, by growing longer staple cotton on a more general scale. I believe you will find the following facts on the matter interesting and suggestive.

Cotton farmers can increase the dollar value of their crop. The mills of South Carolina can avail themselves of a source of supply near home which will mean many thousands of dollars of savings because of lower transportation costs.

South Carolina mills consume between 1,200,000 and 1,300,000 bales of cotton annually. The cotton grown in South Carolina during the past six years has averaged 835,500 bales. The State's consumption of cotton, therefore, considerably exceeds its production. Several hundred thousand bales are shipped out of the State every year, which means that the mills have not been able to use a great deal of the cotton produced in South Carolina because of its staple being below the standard required by the mills.

Eighty-two and half per cent of cotton ginned in South Carolina in 1929, prior to Nov. 1, was of staple under seven-eighths of an inch long. Only 17.5% was of inch staple or over. The inch and longer cotton used in South Carolina mills comes largely from Mississippi Valley points, Texas and Oklahoma and carried a frieght cost of from $5.00 to $7.00 per bale. South Carolina mills pay a premium to western shippers for staple. It would be an economic boon for the farmers as well as for the mills, if South Carolina would organize to produce within its borders a greater proportion of the cotton used by its mills. It also would serve the interests of the mills to agree always to pay a reasonable premium for staple on cotton grown within the borders of South Carolina, since the costs of present transportation from outside the State would be greatly reduced.

For the past three years The Kendall Co. has been promoting the growing of inch to inch and sixteenth staple in Edgefield, Kershaw, Lexington, Newberry and Saluda counties. We have paid a premium for staple in all cases. We have distributed 14,000 bushels of pedigreed seed to farmers. We have sold seed at cost to us, sometimes for cash and sometimes financing the farmers in order to get them started. Farmers who have been growing short staple are encouraged to buy pedigreed seed to produce better staple. Farmers growing inch to inch and sixteenth staple are encouraged to sell their planting seed to their neighbors. We have bought hundreds of bushels of seed from farmers, for distribution to others.

The growing of the better staple cotton is supervised by the County Agricultural Agent in cooperation with Clemson College. To stimulate interest The Kendall Co. has been conducting contests on the Clemson College Five Acre Basis. This year's contests have been in Edgefield, Newberry, and Saluda counties. Ten prizes aggregating $800 have been offered for the largest production per acre of inch and better staple on five-acre lots. There were over a hundred contestants in 1929. Many of the contestants have grown between one and two bales per acre on the five-acre lots.

We have been paying a premium of at least one cent per pound for staple produced from the improved seed and it has been a sound business policy for us. We have cotton buying offices in three counties and in the other two we have arrangements whereby street buyers purchase cotton from the farmers, always paying a premium for grade and staple.

We have arranged for inspection and improvement of public gins. This is important, since improper ginning will spoil all the results of the farmers' work in producing better staple. Proper harvesting methods have been urged; proper methods of poisoning have been brought to the farmers' attention by experts in weevil control.

All of the foregoing work has been co-operative. Clemson Agricultural College, the county agricultural agents, newspapers, chambers of commerce, public ginners, and other agencies and individuals have shown great willingness to cooperate for this improvement of South Carolina agricultural conditions.

This brief review would be inadequate if it failed to mention David R. Coker of Hartsville. Mr. Coker has spent his life making two grades of grass grow where one grew before, and this work has been of great value to the entire country. The pedigreed seed developed by Mr. Coker, Cleveland No. 5, Strain No. 2, has been used entirely in our work.

We for our part have found not only great satisfaction in the work but, as has been stated, have found it to be sound business policy.

Does it not appear that an extension of this program offers an opportunity?

Industrial conditions in our mill communities are interwoven with agricultural conditions. By helping the farmer increase his income and better himself, agricultural living standards will be elevated. A systematic, well-organized plan of improved cotton production in South Carolina, in a few years, would materially increase the income and wealth of its communities. The farmer's income would be increased because of a better price for his improved staple and a larger production per acre. Better farming methods would result. Cotton ginning would be improved.

While it is not possible to state the exact number of dollars of benefit by which South Carolina would benefit, experts who have studied the situation state that $10,000,000 is a minimum figure.

There has been interest shown in "more and better cotton" and it has been encouraging to see such instances as the South Carolina Cotton Manufacturers' Association's appropriation for cash prizes to farmers producing highest poundage of lint per five-acre tract also the interest of individuals and various agencies here and there.

This is all good work. Stimulating the farmers to grow better cotton is worth-while but he needs the stimulus not only of prizes but of better prices for his improved product.

As I pointed out in the first part of this letter, the mills of South Carolina can buy only a small part of their supply in the State. They buy their inch and better staple outside the State and they pay a premium on it. It has to be transported long distances. It has to be handled many more times than is the case with cotton shipped to a mill from near at hand. This transportation and handling add to the cost of cotton to the mill. The South Carolina mills pay a premium already on the cotton supplied to them from outside the State.

Now, if the manufacturers will get together and agree to pay South Carolina farmers a cent a pound premium for inch to inch and a thirty-second, over the price of seven-eighths cotton, the farmers will have a real incentive and reason to grow better staples. The manufacturers will not be paying more for their cotton than they are paying for western cotton.

The manufacturers are the logical group to give the leadership to this plan. Could you not help to bring the manufacturers together and get the plan started?

With kindest regards and good wishes, I am,

Yours very truly,

HENRY P. KENDALL,
President, The Kendall Co.

Lancashire Cotton Fair Stresses Rayon in Mixtures

MANCHESTER, ENGLAND.

THOUGH the Lancashire Cotton Fair has provided us with few if any startlingly new developments in rayon yarns and fabrics, it is better calculated to give an idea of the importance of rayon in the cotton trade than anything else. The Cotton Fair, which was opened on Feb. 11 by the Home Secretary, J. R. Clynes, and will remain open until March 1, may be described as representative of all sections of the cotton trade, from the raw cotton importer to the packer of the finished fabric. Therefore, as rayon strikes a dominant note on at least a quarter of the stands, and is not absent from many of the others, the manner in which it is linked up with cotton is strikingly brought out.

Novel Rayon Effects

The growth of rayon, however, has brought about rival methods of improving cotton fabrics, and the progress of these is particularly noticeable at the present show. Super-methods of mercerization are now making it difficult to tell the difference at first sight between certain all-cotton and other half-rayon fabrics. Esterified cotton yarns also make up into fabrics with very similar dyeing properties to those of all-rayon cloths.

The present exposition, however, points to the fact that it is in the finishing processes that the best progress is being made with rayon also, and this applies particularly to printing. The improved cotton fabrics may certainly be described as rivals to rayon, but equally well may the cheap cotton-and-rayon fabrics be described as rivals to cotton, now that prices have been brought down to such a low level. It is largely the ability to carry out perfect printing that makes the cheap rayon-mixture fabric, with an American-cotton warp and a viscose "C" quality weft, a success.

In the finer end of the trade, there are some excellent examples at the present show of all-rayon ninons, crepes, and crepe georgettes. Among the most interesting fabrics noticed by the writer was a light-weight ninon finely brocaded all over and then printed, giving a novel gossamer effect to the finished cloth. Some remarkable effects are also noteworthy in crepe voiles. There is a noticeable tendency towards the increased use of woven fabrics for lingerie at the present time, and 100%-rayon fabrics made from fine filament dull luster yarns for both warp and weft are likely to be in vogue. In this connection, British Enka, one of the only two yarn-producing companies represented at the fair, have just brought out a new dull-luster, soft-handle yarn, which has 52 filaments in 150 denier, and is known as "Fashionella."

Spun Rayon in Evidence

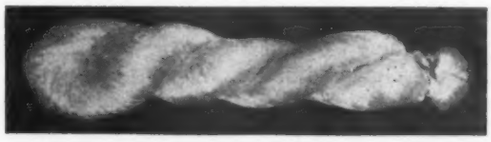
Efforts made by the cotton-spinning trade to produce suitable spun rayon or staple fiber yarns are meeting with considerable success, and the strength of the finished fabrics is gradually being improved without losing the quality of the soft handle of spun rayon. Increasing numbers of firms in various parts of Lancashire are taking up the spinning of staple fiber, which is now being spun in counts as fine as 70s and 80s on ordinary cotton machinery. Lingerie fabrics are providing the best outlets for the fiber at present, but delightful printed dress fabrics in plain weaves are being tried out. There are also several firms with double-sided, plain-dyed fabrics made entirely of spun rayon.

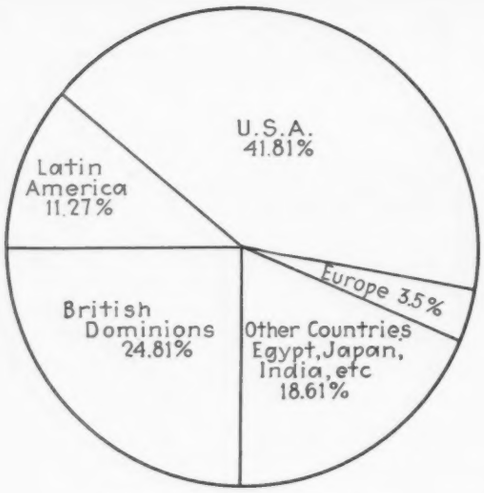
Rayon is more prominent for furnishings, casements, and bed covers than in any other section of the trade. Novel effects are being produced in cotton-backed rayon brocades, and also in 100%-rayon brocades. In connection with the latter, viscose and acetate cross-dyed fabrics are particularly popular. Cotton and rayon slub reps are still among the most popular furnishing fabrics, and are now being introduced as bed spreads.

Heavy ribbed poplins in cotton and rayon are in demand for the same trade.

There is nothing particularly novel in the wide selection of rayon brocade fabrics for the export markets, and these are shown in varying percentages of rayon to suit the particular tariff limitations. Firms are, however, making good use of rayon in fabrics in which only a small percentage is allowable. Successful attempts have been made to bring the greatest possible amount of rayon to the surface. Several stands feature what is known as "imitation embroidery" which is a brocade effect on a cotton fabric of the leno type. Fabrics produced on a dobby loom with a cotton warp and a rayon weft, which have a soft handle and closely resemble knit fabrics, are still a fairly popular line.

The vogue for more variety in shirtings is resulting in interesting brocade effects in rayon on a cotton ground. The brighter colors are for the South American markets, and the more sober styles are for the home markets, the Dominions and the United States. There is a good display of fine cotton-and-rayon mixture yarns for the fancy knitting trade, grandilles and knopps being the most popular. There are some striking rainbow-colored dyed by the "Brandom" process.





Where Irish Piece Linen Went During 1929

Facing Reduced D

IRELAND Modernizes L

BELFAST, IRELAND.

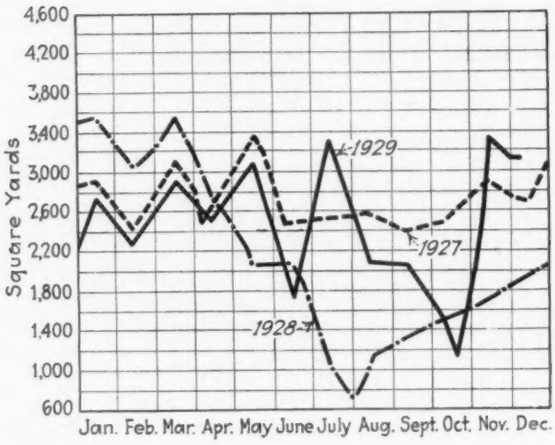
SINCE the Great War the job of the British linen industry—now almost entirely centered in Northern Ireland—has been merely to keep afloat. Much of the difficulty which it has encountered has been due to the drift of the raw-material supply into the grip of European monopolies in Russia and the Baltic States, which demand double the natural pre-war price of flax, with Irish-grown flax now representing only about 10% of the total supply needed. Hence, linen can only be offered to the consumer at 100% above its pre-war cost. Further, since the United States is Ireland's best customer, the high tariffs in this country act as still greater handicaps.

With the opening of the new year, however, prospects are much brighter than they have been at any time since 1913. The work of the Linen Research Institute at Lambeg, near Belfast, which has been going on for the last ten years, is now bearing fruit in increased production of flax per acre and in improved methods of manufacture. Moreover, the Irish linen producers who seem to have been infected with the lethargy of depression now, after an extensive tour of investigation in United States and Canada in 1929, are convinced that, if Irish linen is to make headway in North America, they must be more alert in stressing style in their product, and must give the buyer what she wants rather than what they wish her to have. With that aim before them, 1930 opens more hopefully.

While English cottons look to the eastern world for customers, Irish linen looks to the West, as may be seen by its distribution. Frankly, it was time the Irish linen makers made extra effort to retrieve their United States markets, as may be seen by the following data of exports thereto of piece linen: 1913, 134,008,705 sq.yd.; 1925, 40,225,200 sq.yd.; 1926, 33,912,700 sq.yd.; 1927, 32,114,800 sq.yd.; 1928, 26,553,100 sq.yd., and 1929, 30,729,270 sq.yd. It thus appears that the United States' consumption of Irish piece linen in 1929, while about 4,000,000 sq.yd. better than in 1928, is only 27% of the 1913 consumption.

Manufactured Linen Exports Increase

It may be explained, however, that the value of piece linen represents only 54.1% of the total value of linen exports, and that there has been an increased shipment of linen in made-up articles, despite the higher American



Exports of Linen Piece Goods to United States

tariff enacted for such. Moreover, with the very attractive prices ruling for handkerchiefs, it is certain that the United States took a large proportion of the 5,198,557 doz., valued at the factory at $4,865,990, which Irish manufacturers produced during 1929.

As a matter of fact, in fine cambrics Irish producers have a limited rivalry, and that from France only. Then, also, the Irish and Scottish Linen Damask Guild, operating from New York, has been responsible for keeping damasks well to the fore during 1929 as "impressively correct." Finally, in the big class of linens known as "unenumerated" the Irish industry has a good place in the American market, but with a hard struggle against the cheaper miscellaneous fancy linen goods from Belgium, Czechoslovakia, Germany, France, etc.

These countries, indeed, once good Irish linen customers, now, by longer working hours, cheaper labor, and lower taxation compete heavily against Irish linen even in the United Kingdom itself. Thus last year linen imports from the Continent reached over $5,000,000 in value.

In the British Empire overseas trade, Irish piece linens declined from the previous year. While the British population migrates to the Dominions, and the home linen gets a 96% preference, it is decidedly disconcerting that it has tended to decrease in favor during recent years. South Africa, however, is the one market of Irish linen where the bulk now taken exceeds that of 1913.

Latin America, always a good purchaser of Irish textiles, last year took 45% of the total taken by the combined British Dominions, in spite of the fact that Irish linen exporters have tended to be rather lackadaisical in regard to this market.

Total exports last year of all Irish linen manufacturers were valued at $42,500,000, compared with $41,000,000 for 1928 and $44,000,000 for 1926 and 1927. Home

Demand

Linen Methods

By Alfred S. Moore

Ewing Galloway

Flax Starts on Its Way Through Belfast Mill

trade is about one-third of the export trade.

The most striking trend at present in the Irish linen trade, however, is the improvement in methods being introduced through government assistance and through cooperation among the producers themselves. The medium by which this is accomplished is the Linen Research Institute, mentioned above, which, during the last 10 years, has been carrying on important researches in developing improved flaxes, simplifying the preparation of the raw material, reducing waste, and improving weaving, bleaching, and finishing processes. The work is now supported by the British Empire Marketing Board grant of $93,750, a sum which, supplemented by the Northern Ireland government, will provide funds of $15,000 for capital expenditure, and $25,000 per annum for maintenance purposes and for research into problems of flax growing and fiber production. The trade itself, also, is now taking a live interest in supporting the work. Last year, despite the depression, manufacturers gave more financial support to the Institute, and during 1930 the membership promises to be even more extended. The research work carried on by this institute is most remarkable. After experimenting for ten years to get seed to yield 80% more linen fiber than the flax seed then sown, a few grains of oily brown seed, not so large as to cover a cent coin, were carefully germinated and their progeny was encouraged in similar fashion during successive generations. The fecundity of the seed has been phenomenal, and now, after only seven years, over 12,500 acres sown with it form part of the 1929 flax crop.

Later, excelling even their own record, the experts of the Linen Institute brought into being other pedigreed strains of flax seed, of which three—the Liral trio—gave even more fiber than the first. With this Liral seed over 120 acres have now come into fructification.

To Cheapen Linen Eventually

Another aim towards which the scientists of the Institute are directing their work is the reduction of the tedious and expensive process of preparation of the raw material before it reaches the spinner, which is one of the chief reasons why linen is so much more expensive than cotton. In the mills, too, attempts will be made to reduce the percentage of tow occasioned by hackling, as too much waste occurs there.

The year 1929 was notable also for achievements in weaving research, especially for the preliminary work done on the relationship between characteristics of yarn, nature of the weave, behavior of the loom, and behavior of the fabric in finishing and in use. Remarkable and unexpected results, as revolutionary as any achieved during the past century, have been so attained.

Better Bleaching Aims

Bleaching in its many phases also presents a legion of problems, many of which are being probed at the Research Institute. In fact, linen bleaching is now no longer a haphazard affair, but the most exact of sciences. The durability of linen depends on: (1) the material, (2) the skill of the loom, and (3) the practice of the laundry. When any complaint is registered, the laundry usually blames the loom and the loom blames the laundry. Dr. Gibson, the able director of the Linen Research Association, is out to see exactly where the laundry fails to meet or correct the loom, and how the cooperation of both may be improved. Both linen users and makers must benefit immensely from this work.

Again, much time is being devoted to linen finishes and their interaction with the material substances of the flax fibers.

Linen has always been a quality textile, and its success in the future will depend more than ever on stressing its superiority. This is the line being taken by the Linen Research Association, and its success so far is exceedingly promising for the future. The present trend in Irish linens is more to style and to made-up goods, and an association of manufacturers and merchants, the Irish Linen Guild, is pushing the sale of one-priced standard household items—each in its holophane carton—with encouraging success.

Some Interesting Types of Warp Knitting Machines

By M. C. Miller, M.E.
Mechanical Engineer, Manville, R. I.

THE method of producing warp plush fabrics as shown in Fig. 173 (TEXTILE WORLD, Dec. 21, 1929, p. 46) makes use of only one set of needles with a set of pins for holding the loops of the plush threads. These loops, of course, must be cut and trimmed in the finishing operation and the machine produces only one piece of fabric at a time.

In order to increase the production, the method shown in Fig. 176 is suggested. This method makes use of two sets of needles, the plush threads being floated from one set of needles to the other, each set producing its own fabric. Both fabrics are connected by the plush threads which are later cut and trimmed. In this manner two separate plush fabrics are produced without the necessity of cutting open the plush loops, as in the method previously described. By this method twice as much fabric is, of course, produced.

METHODS of increasing production of plush fabrics on warp knitting machines are described with illustrations of the knitting action

The machines are equipped with two sets of needles, both of them having alternating up-and-down movements. Both sets of needles are rigidly fastened in their respective bars *a*, which are caused to move up and down with any one of the mechanisms previously described. In back of each set of needles is fixedly fastened the bar *b*, which is equipped at its upper end with a comb or knock-over portions *c*. The members *c* cause the loops to be knocked over as the needles are drawn below their upper edges.

There is further provided a series of points *d* which are at times caused to move between the needles to hold down the loops as the needles rise; although in some forms of machines, if sufficient fabric take-up is provided, these need not be used.

In the particular construction shown there are provided five sets of eye-needles *e*, of which the two outer ones on each side produce their respective looped fabrics while the inner set *e'* produces the float or plush threads.

The Knitting Action

The action of the knitting elements is clearly shown in the drawings of Fig. 176. View 1 shows both sets of needles down. View 2 shows the points *d* as having come inward. View 3 shows one set of needles raised with the points *d* holding the loops from rising. View 4 shows all the eye-needles moved to such a position as to lay the threads of the three outer eye-needles between the knitting needles. All the eye-needles are shifted endwise the required amount to produce the particular stitch required. View 5 shows the eye-needles moved to their central or neutral position, having wrapped by this movement the yarns of three sets of eye-needles around their respective knitting needles. The other two eye-needle yarns will later produce fabric on the other set of needles and do not lay any yarn in this course, even though they move, as they do not pass to the hook side of the needles in their movement.

In view 6 the same yarn-laying arrangement is shown as in view 5, except that the needles have been raised further to shed their previous loops *x*, with the three new yarns lying above the tip of the latch. View 7 shows the needles partly drawn down with all three yarns in their hooks. View 8 shows the same set-up as view 7 with the exception that the points *d* have been withdrawn to permit the new yarns to pass to the knock-over, as shown in view 9. The views 10 to 16 inclusive show the yarns and needles of the other set producing their fabric in exactly the same manner as that described for the opposite set.

With Spring-Beard Needles

It is to be understood that, while the above described method shows the use of latch needles, spring-beard needles could be used if needle-beard pressing mechanisms were provided. Other means, such as nibs of knock-over bits, would probably be used to hold down the fabric and to insure the new yarns being laid at the right height to permit the beards to be pressed. The nibs of the knock-over bits are well adapted for this additional function.

Warp machines of this type previously described have been shown as using latch needles. While a great number of Raschel machines are built with this type of needle, spring-beard needles have also been used. A construction using spring-beard needles is shown in Fig. 177. This construction also shows regular knock-over bits. The needles 1 are mounted in leads 2. They could be mounted directly in the needle bar by drilling and slotting the upper end, but in the particular construction shown the leads are held in place by the clamps 3, thereby rigidly fastening the needles to the needle bar 4, which is caused to move by the action of the levers 5 and the links 6. The levers 5 give the needles their end up-and-down motion, while the links 6 cause

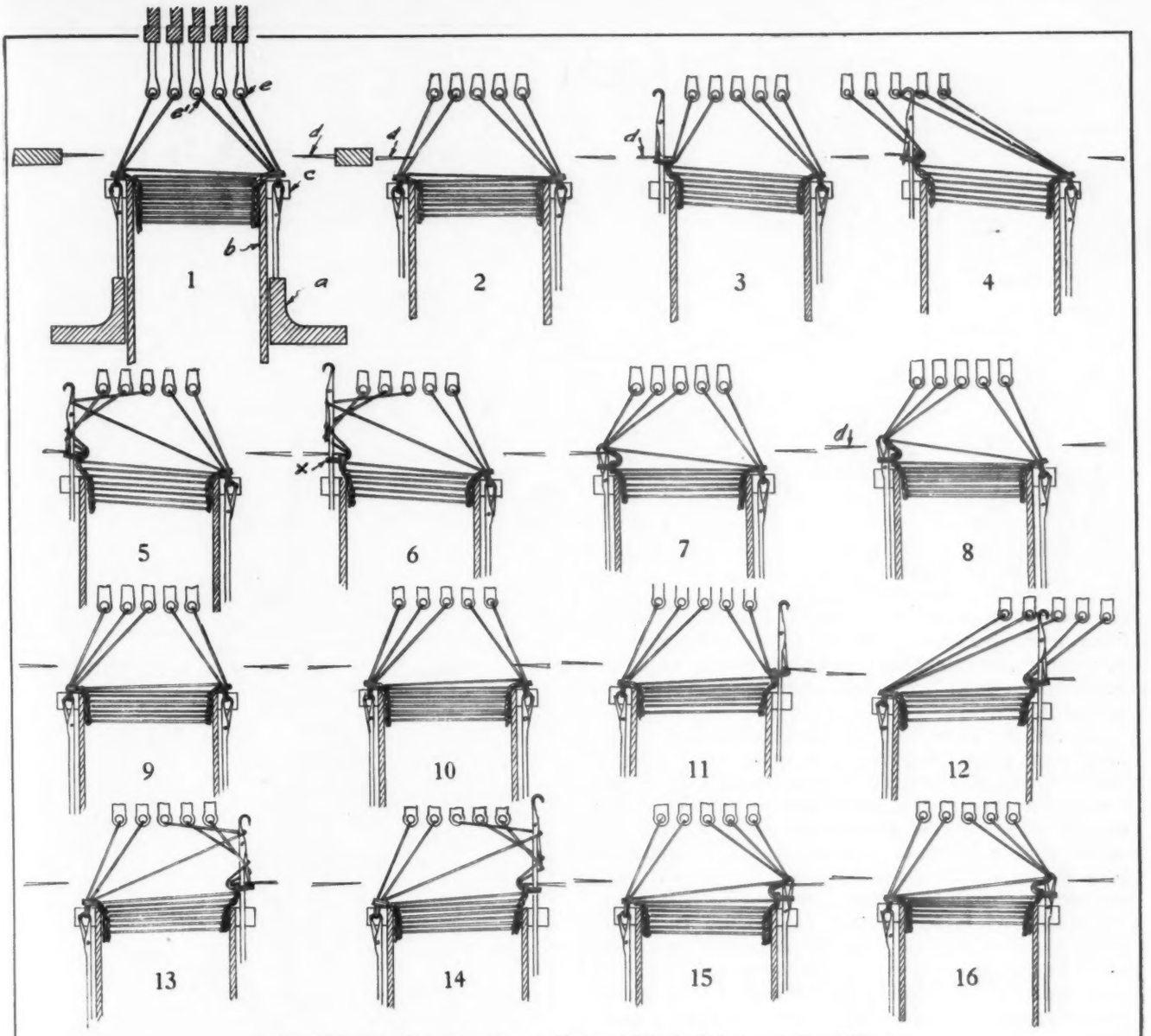


Fig. 176. Making Two Warp-Knitted Plush Fabrics at One Time

them to move to and from the press and the knock-over bits by fulcruming on the pin 7.

The knock-over bits 8 are, in this particular construction, leaded in rigidly fastened to the bars 9. They receive their movement to and from the needles by the levers 10; and their up-and-down motion, by the lever 11 fulcruming on the pin 12. There is further provided the press iron 13, which receives its movement to and from the needles by its lever 14 and its up-and-down movement by the lever 15. Both sides of the machine are construted alike but work alternately. Mounted over the entire assembly are the eye-needles 16, which are leaded in the particular construction shown and rigidly fastened to the bars 17. These bars are carried by the levers 18, which are oscilated by the shaft 19. The levers 18 or bars 17 have an endwise motion imparted to them for wrapping the threads around the needles, as is customary in warp machinery.

Knitting Operation

As shown in Fig. 178, view 1, the needles are both down, with the knock-over bits of the right side holding the loops to the back of their needles. The needles thereafter rise, as shown by the dotted lines in this view. Then the eye-needles are shifted endwise in order to wrap the yarn around the needles as they are later swung to the dotted position as herein shown. Thereafter the needles are drawn down. When they reach the position about as shown in view 2, the press iron 13 is brought forward, and in this manner the beards of the active set of needles are pressed. It is understood that this pressing must take place before the tip of the beard reaches the fabric line.

The press iron continues to keep the beard closed while the needles continue downward toward the knock-over, as shown in view 3. Immediately after they have reached the position shown in this view the press iron is withdrawn and the needle continues downward to the knock-over, as shown in view 4. It is understood that the set of needles that were inactive have in the meantime held their hooks in such relation to the active needles as to prevent the distortion or straining of their connecting loops. Thereafter the previously active set of knock-over bits moves downward to the dotted position shown in view 1, while the other set of knock-over bits comes up and into a position to hold its loops to

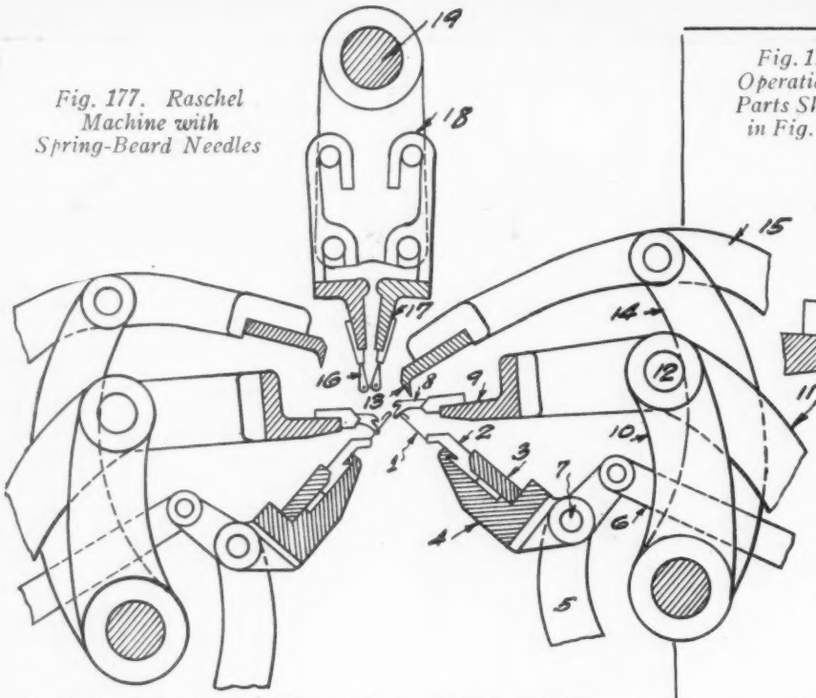
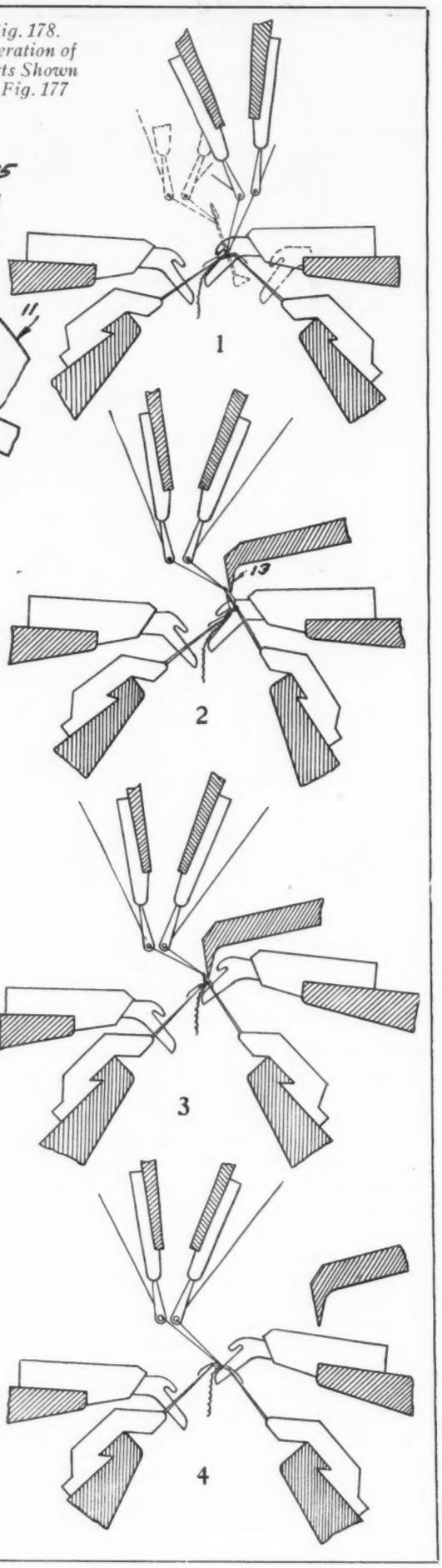


Fig. 177. Raschel Machine with Spring-Beard Needles

Fig. 178. Operation of Parts Shown in Fig. 177



the back of their respective needles. These needles are raised and move through the same cycle with their component parts as was described for the other set. In this manner two-faced or double tricot warp fabrics are produced.

It must be borne in mind that this particular construction is by no means standard or universal. A great many designs and forms of operating parts have been evolved and constructed—each with its particular features of merit—for the purpose of producing a particular or varied type of fabric. I believe, however, enough has been shown of the general construction of flat warp machines to indicate clearly the versatile nature and adaptability of these machines to produce an infinite number and variety of fabrics. A number of books would be required to cover the development of this phase of the knitting art. While much has been done to perfect these machines for an endless variety of fabrics, practically nothing has been done in the designing and constructing of such machines for the production of shaped garments, in which their drop-stitchless fabric would be of tremendous value.

Knitting Milanese Fabric

Another type of warp machine has been barely touched upon in these articles. This is a type which has been evolved for producing warp fabric in which the warp threads, instead of shifting sideways over a definite number of needles in one direction and then in the opposite direction, shift continually in one direction. These machines produce what is known as milanese warp fabric. This is usually constructed with two sets of warp threads which are not guided by eye-needles but are shifted sideways in opposite directions continually, without reversing, by means of thin, blade-like punchings. When the selvages are reached, the threads that were feeding to the right begin feeding to the left, and the threads that were feeding to the left begin feeding to the right. When they again reach the selvages, they again reverse their motion. Each set of warp threads feeds over a rail—one set over a high rail and the other set over a somewhat lower rail. There are devices at each end for dropping the threads from the high to the low rail, and other devices for raising threads from the

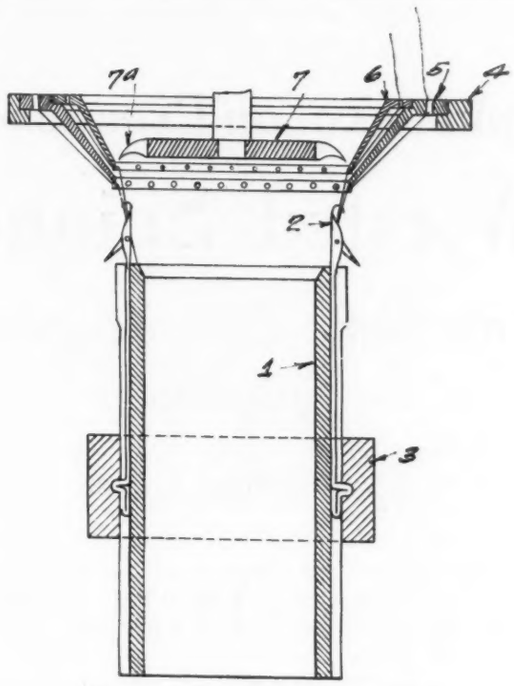


Fig. 180. Circular Warp-Knitting Machine

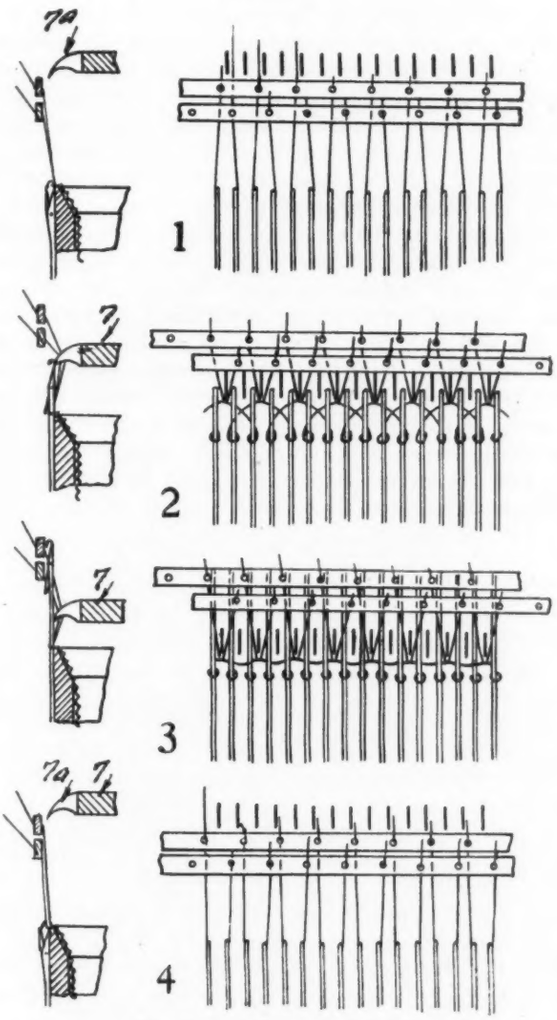


Fig. 181. Operation of Parts Shown in Fig. 180

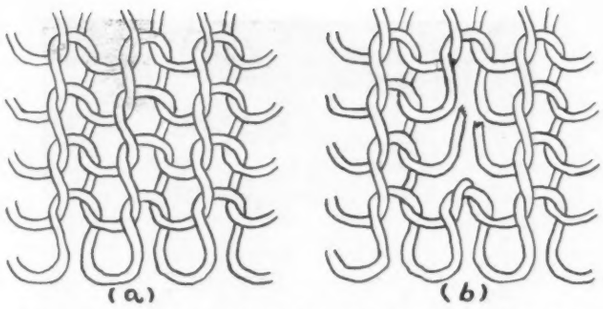


Fig. 179. Fabric Resembling Filling-Knitted Type Which Will Not "Run"

low to the high rail. As the threads reach the edge of the fabric they are raised or lowered separately and successively. The beams carrying the warp threads are usually, but not necessarily, carried under the machine on an endless chain, which moves slowly, keeping time with the shifting of the threads on the rails.

The machine really produces a fabric very similar to double atlas tricot as produced on regular warp machines, only that in atlas tricot the threads can only be shifted a definite and limited amount; forty-needle Atlas is about the maximum possible.

Milanese warp fabric can also be produced with only a single set of warp threads, in which, however, the drop-stitchless feature of the fabric is lost—drop stitches running just as readily as in ordinary filling-knitted fabric, but on a bias. One reason why single milanese fabrics have not been used in the production of sheer fabric is that they drop stitch readily. If sheer or transparent fabrics are desired with two warps, in order that they will have this drop-stitchless loop effect, the threads must be of impractical size, for of course this type of fabric will be about twice as thick as filling, tricot, or single-warp milanese fabric produced of the same size yarn. This is due to having two warp threads interknitting at the same time.

Non-Run Filling-Knit Type

An interesting invention has been recently made relating to a type of loop fabric that should greatly resemble filling-knitted fabric. It is not a warp-thread fabric, and yet is an anti-run or drop-stitchless fabric. A view of this fabric is shown in Fig. 179 at *a*, while *b* shows this fabric with a hole in it and clearly indicates that drop stiches or runs are not possible.

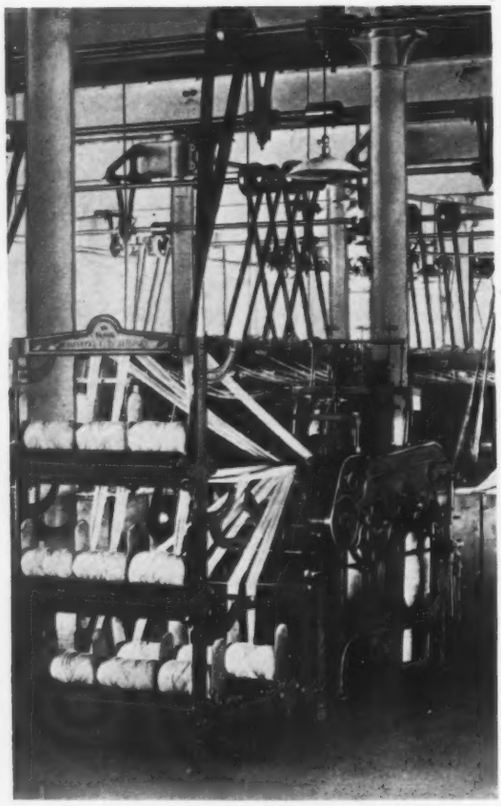
To the best of my knowledge this fabric has not as yet been mechanically produced, although I believe samples have been knitted by hand.

Circular Warp Machine

Still another evolution of the warp-machine principle is the circular warp machine, of which many types have been evolved. The Terrot machine, for instance, has been built as a combination filling and warp machine, as have quite a number of other circular knitting machines. Some of these produce regular single and double tricot, while others combine the principles of filling and warp knitting in combination with loom-like warp and filling threads. This latter type is capable of producing at very high speed fabrics not to be readily distinguished from regular woven textiles and having elasticity in either or both directions, or neither, as found desirable.

I shall close this series of warp-knitting articles with a description and drawings of one type of circular warp

(Continued on page 79)



Opinions of an Experienced Worsted Spinner *on Some Controversial Subjects*

By William Green

IN ORDER to keep variations in worsted yarn at a minimum one should use weighed tops in starting a set of drawing, and blend them if possible. If three gillings are decided upon, the cans should be weighed at the first gill box. Carefully examine the knock-off motion. It is advisable to note how the cans run out on the next gill box, as this furnishes a check on the knock-off motion.

Differing Flutes and Aprons

It is advisable always to have even doublings on the gill boxes—six double cans if possible on the second gilling. In a three-gilling layout, the third gilling is the spindle gill. If odd gill boxes are used, care should be taken to see that the proper weight is obtained from each, as different makes have differently shaped flutes in the front and back rollers and do not always give weights which are in accord with the calculations. Even with like flutes the thickness of the apron leather will cause variations.

If possible, even doubling should be carried as far as the weigh box, which is customarily the fifth operation. Of course the cans and bobbins must be weighed, and knock-off motions must be used on all operations as a check upon the tension. Any strain on the ends can be easily detected if the bobbins are not full. The knock-off motions enable the operator to keep the sets even on the following operations and thus avoid waste.

On low-grade wools, such as carpet and mohair, the weather is liable to affect the washers in open drawing. This class of worsted is less elastic and is easily strained.

Draft, Twist, and Ratch

In regard to draft, twist, and ratch in worsted drawing, there are many diversified opinions. Experience has taught me that it is best to keep the draft within the length of the ratch, although it is quite common to run the draft a trifle longer than the ratch, as when spinning fine counts from a well-conditioned top. The condition of the tops and the age of the wool play important parts. There is no greater handicap to obtaining good results than new wool, new top, and new roving, especially in the spinning of fine worsted counts.

For ratches on fine wools, a $\frac{1}{4}$-in. drop on each operation will be found to be good practice if the top is sufficiently aged and conditioned. If the top is new and hot, however, the ratches should be set closer. The twist will have to be chosen in accordance with the condition of the top, and it will be found that with new top it is best to keep the twist on the firm side, as otherwise the outside end is liable to lap on the top front roller, especially in the early morning of a cold day.

Some will say that these difficulties can be overcome by oiling the top or by employing conditioning apparatus. These things add to the cost. Oiling loads the stock with material which must be washed out again in the dyeing and finishing. Straight olive oil in small quantities is generally considered the best when oiling is necessary, but I prefer a dry top and a dry roving. Of course if a mill is fortunate enough to have a naphtha degreasing plant, there will be much less trouble in working the top and the spinning quality will be increased at least 10%—especially on fine wools.

Operations and Doublings

The number and character of operations needed and the number of doublings required are other causes for differing opinions in the worsted industry. With three gillings, four other operations are all that are necessary for medium counts, but on fine counts an extra operation is required. Where there is a demand for fine counts, it is well to specialize, and cone drawing is best when there is enough demand to warrant large quantities. In the cases of mohair and carpet stocks, two gillings with four other operations are all that are necessary for low counts, providing the tension is kept regular and there is no straining.

Some overseers seem to think that the benefit derived from doublings is in proportion to the number, but 50,000 doublings will not cure variation in yarn if these details are not followed out. As a matter of fact, more doublings mean more operations, and I find from practical experience that the fewer operations the better, as long as the results are obtained. Too much working of

the wool means destroying or weakening the serrations on the fiber—in other words, taking the life out of the fiber and destroying the most precious quality that Nature has given it.

When the roving is conditioned, as in fine work, there is usually not a great deal of trouble in the spinning room. It is simply necessary to get the production and keep the cost within satisfactory limits. Attention to the details I have mentioned helps production and low cost by making it possible to spin with less twist.

In the cases of mohair and carpet stocks, there have been improvements made in spinning of late years which are not appreciated by the majority of manufacturers of carpet, plush, and pile fabrics. I refer to the new automatic-doffing flyer frame. It is well known that flyer spinning of this class of stock is particularly suitable for giving the desired luster, especially in mohair. I believe that a flyer-spun mohair yarn contains at least 50% more luster than a cap-spun yarn, and probably 25% more than a ring-spun. Although the flyer frame can make a bobbin of nearly as much yarn as a ring frame, the ring frame can be run at a higher speed. It is unfortunate that the ring frame cannot be made to doff automatically with success and that it does not give better results on these yarns.

It would mean a great deal to plush manufacturers to have a yarn without so many kinks, as double knots cause a lot of trouble and expense in burling and mending. These could be considerably reduced in number with the proper equipment.

The greatest hindrance to the use of flyer spinning has been the lower production, but the new flyer frame to which I have already referred can be run at a much higher speed due to the new type of spindle with which it is equipped. The automatic doffing eliminates the unscrewing and removing of each flyer from the spindle for removing the full bobbins, and the reverse procedure after the empty bobbins have been placed on the machine.

Builders claim that their new frame can be doffed in one minute with an average of five ends to piece up afterward on a 200-spindle machine.

Alfred Hofmann, Inc., Expands Plant

By George C. Bryan

Lockwood Greene Engineers, Inc., New York

ALFRED HOFMANN, INC., American and Canadian representative of Schubert & Salzer Co., manufacturer of full-fashioned hosiery machines, Chemnitz, Germany, has found it again necessary to extend its service facilities; and a new three-story plant, which has recently been made ready for occupancy, has been built next to the earlier plant at West New York, N. J.

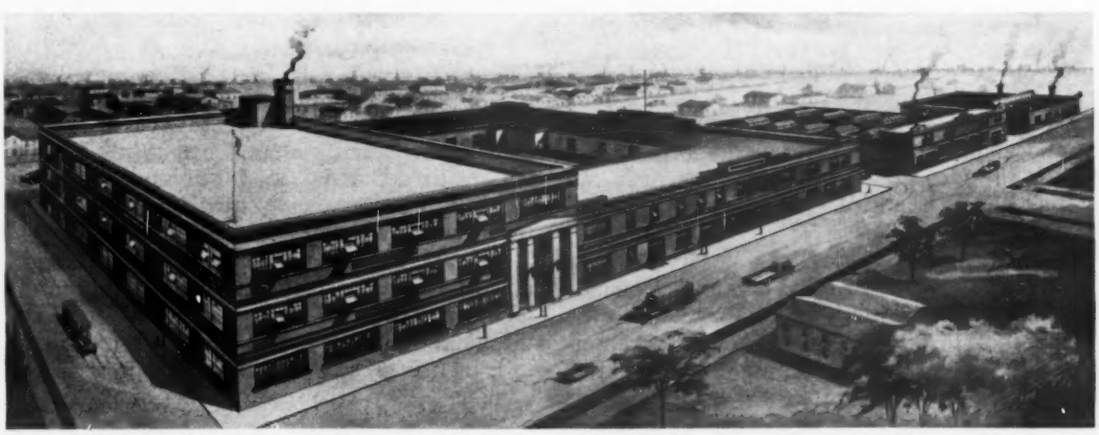
This building is primarily intended for service to the users of type H.S.L. full-fashioned hosiery machines; and, in addition, it is contemplated to have a show room where the various types of machines can be seen in operation. Besides the three stories, there is a basement. The new structure measures 103 by 125 ft. Brick walls, steel and concrete floor system, and steel sash are used.

Various changes were made to the existing plant in order to have an efficient layout for a modern machine shop doing precision tool work. There is a vacuum-heating system throughout the plant, the steam for which is furnished by two low-pressure Kewanee boilers in the basement of the new building. The original power plant was dismantled and the system in the existing mill connected to that in the new one. This work was done by the Ricker Heating and Ventilating Co., West New York. An automatic sprinkler system was installed in new and existing buildings by Thomas Viking Sprinkler Co., of New York. Light and power wiring is all in conduit, and the lighting installation is entirely of Mazda lamps. This work was done by T. C. Morris, Jersey City.

The general contractor on the work was the Auf-der-Heide Contracting Co., West New York. The electric freight elevators were furnished by the Otis Elevator Co.

Attractive entrance, lobby, and stairway to the main offices on the second floor are obtained by the use of a special limestone trim. The president's office has walnut paneling, an ornamental ceiling, and other special decorations. The building has ample natural lighting throughout, and the necessary sanitary toilets and washrooms are provided.

The building design and machinery layouts were made by Lockwood Greene Engineers, Inc.



Plant of Alfred Hofmann, Inc., West New York, N. J.

Furness Corp. Rayon Soon Ready

W. H. FURNESS of National Park, N. J., started more than 15 years ago to experiment in a small way with the production of a new yarn, made in accordance with specifications developed by him. From this beginning the Furness process of manufacturing rayon yarns was originated. An official of the Furness Corp. now states that they plan to produce 1,000 lbs., per day of the new yarn starting May 1, and by fall they plan to have production increased to 5,000 lbs. a day.

According to this official, the buildings that they occupy and have contracted for, will permit them eventually to produce approximately 60,000 lbs. per day.

Furness rayon first came to the attention of the industry in 1927 when a charter of incorporation was granted to the Furness Corp., under the laws of New Jersey, with an authorized capital of $10,000,000. At that time they took possession of buildings in Gloucester, N. J., that were occupied by the Welsbach Co., a subsidiary concern of the United Gas Improvement Co., one of the largest public utility concerns in the United States, which, it was at that time reported, was interested in the development of Furness rayon and its distribution on commercial lines.

According to several associated with the new concern they were planning at that time to soon have a production of 10,000 lbs. of the new yarn per day. The rayon was to be manufactured under a form of the cuprammonium system, from 100 to 150 denier, having from 80 to 100 filaments. While interest was aroused in the trade at that time, nothing further was heard from the Furness group for many months.

During this time they found it was necessary to continue experiments along certain lines to bring their yarns up to standards they had in mind. It was necessary for them to make changes in their machinery, all of which they designed and erected themselves. It also required time for them to obtain patents on their various machines.

Early last year it became known that Ledyard Heckscher, former president of the Tubize Artificial Silk Co. of America, had been chosen head of the Furness Corp., indicating to many that important changes in the Furness organization were being made.

At that time the company took over additional space from the Welsbach Co., and plans were made for the erection of new buildings. Mr. Furness was formerly president of the firm, relinquishing this office to Mr. Heckscher in order that the inventor of the process might be free to give all of his time to perfecting the machinery and to getting the yarn ready for commercial production. Mr. Heckscher at the time denied that the Furness Corp., had any connection whatever with his former affiliation, the Tubize Artificial Silk Co. of America.

The first new unit has been completed by Day & Zimmerman, engineers. It is in this structure that commercial production will begin in a few weeks. More than 36 acres are held by the firm in Gloucester.

Plant Location Desirable

There is not only adequate space for large production but they have room for future expansion. The site is located directly on the Delaware River, a few miles away from Philadelphia. There is not only a good supply of water, to take advantage of which the Furness Corp., is erecting a water treating plant, but a supply of excellent labor.

Rumors have recently been prevalent in the trade that Furness rayon was being sold commercially but an official of the company stated this is not a fact. He admitted that Furness rayon had been placed in several mills in various sections of the country but this was only for experimental purposes or for dyeing tests, and none of it has yet been sold. One report indicated that a trade name had already been decided upon under which they were being sold but it is stated that this is in error.

In dyeing, an official stated, Furness rayon acts somewhat like cotton in that it is slower than ordinary rayon in taking the color and this in itself, it is felt, is a distinct advantage in permitting evenness of dyeing when Furness yarn is used. Its sponsors claim that the new rayon has properties that are different from any other rayon now manufactured. It is claimed, for instance, that the breaking strength of the yarns both in wet and dry state will be higher than other rayons.

Associated with Mr. Furness during the last seven years, S. F. Hansell is taking a leading part in managing operations at the plant. It is reported that Furness rayon will be sold on cones for the knitting trade but it is not believed they will do any dyeing at Gloucester.

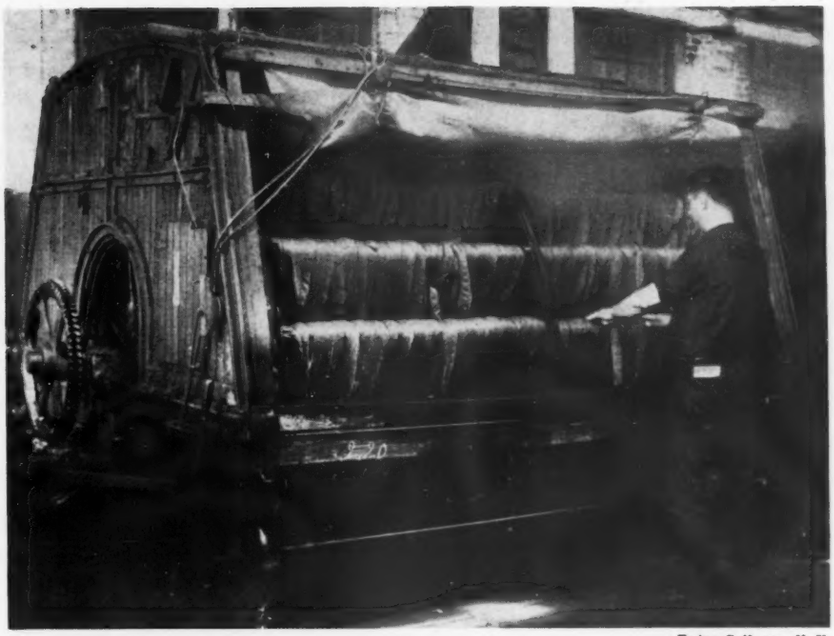
Forward March of Fabric Footwear

(Continued from page 31)

small, for the reason that imported cloths are much more expensive, and another consideration as important as is the expense is the fact that American textile mills can weave not only just as beautiful, but more practical, shoe cloths.

The test that all shoe cloth must pass is serviceability. A shoe fabric must be able to stand a hundred pounds pull; it must be so woven that it will not crack with the action of the foot in walking. Much more strain is exacted on shoe fabrics than on dress fabrics. After serviceability, come color and pattern. Rodier of Paris often spends two or three years in the testing of a certain color and weave.

Experimenting in fabrics for footwear is constantly going on, both abroad, and here at home. Shoe manufacturers appreciate the close cooperation of textile men, as it is realized that fabrics for footwear are only in their infancy. For instance, taffeta, so much in demand for the new party dresses of 1930, that crisp-like fabric, is being experimented with now as a shoe fabric. Crepe is now practically perfection, but when crepe was first used in shoes, it was so thinly woven that the backing came through the surface of the silk. Satin has been developed to a high degree of satisfactory shoe service. Moire is adjudged one of the best wearing of shoe fabrics. And so, for 1930,—behold the new, beautiful, and serviceable lintong!



Dyeing Wool in Revolving Skein-Dyeing Machine

Ewing Galloway, N. Y.

Recent Trends in Wool Dyeing

By Winn W. Chase

Assistant Editor, TEXTILE WORLD

IN dyeing wool—as is true of the other fibers—attention has been focused largely on the production of fast shades. Materials intended for men's wear, the higher grades of women's garments, knitted outerwear, bathing suits, rugs, and carpets are being demanded in guaranteed-fast colors. For this type of work the well-known chrome processes of dyeing are being supplemented by methods employing vat and napthol colors. The increased use of rayon as effect threads in woolens and worsteds has also resulted in the development of special processes for dyeing fabrics containing this fiber. Where pure, brilliant shades are required, which cannot be produced with the chrome colors, weak acid dyestuffs applied with the aid of acetic acid or ammonium acetate are often used.

Chrome Dyeing

For the application of the chrome dyestuffs the bottom-chrome method is the oldest and best known. In this process the material to be dyed is first mordanted for 1 to 1½ hours in a bath containing 1 to 3% of sodium bichromate and 1 to 2% of argol; it is then rinsed, and dyed for 1 to 1½ hours with the addition of 2 to 5% of acetic acid. When the after-chrome method is employed, the material is first dyed with the addition of glauber salt and acetic acid; upon exhaustion of the bath 1 to 2% of sodium bichromate is added, and the treatment continued for ½ to 1 hour. The after-chrome method is particularly applicable to piece goods containing threads of regenerated-cellulose rayon. The meta-chrome, or single-bath, method has the advantages of greater economy in time, increased production, and ease of matching shades. In this process the bath is prepared by adding to the dye liquor a mixture of sodium bichromate and ammonium sulfate; the material is entered, dyed for 1 to 1½ hours, 2 to 3% of acetic acid is added to exhaust the bath, the liquor run off, and the goods rinsed.

During the last year considerable study has been made on the use af ammonium acetate in wool dyeing. Ammonium acetate, which is one of the so-called "acid-boiling substances," is slightly acid to litmus in dilute solutions at temperatures above 100° F. On ordinary wool ammonium acetate acts as an alkali, while on carbonized wool it has anacid reaction. This causes a difference in behavior of the salt in dyeing the two classes of wool; and further research is necessary, therefore, to determine whether acid-boiling substances are suitable for use in wool dyeing.

Dyers are well aware that wool dyes differently before and after carbonizing. Recent investigations on the iso-electric point of wool indicate that the pH value of the fiber varies according to the treatment to which the wool has been subjected. It is now believed that this difference in hydrogen-ion concentration is responsible for the variations in dyeing.

A number of new wetting-out agents have been developed for use in wool dyeing. The addition to these materials to the dyebath is said to increase penetration, aid in evenness, and impart a supple feel to the fabric.

Use of Acid Colors

Where bright shades of good fastness to light are required specially selected acid colors are often employed. The usual method for applying these dyes consists of preparing the bath with the requisite amount of dyestuff and water, 3 to 5% of acetic acid, and 10 to 20% of glauber salt. The material is then entered, the bath

brought to a boil, and maintained at this temperature for ½ hour; the liquor is next allowed to cool, 1 to 1½% of sulfuric acid is added, and the dyeing continued for ¼ to ½ hour. With some of the acid colors modifications of this method are necessary. Dyeings produced with these colors are suitable for curtain materials, upholstery, and yarns for various knitting purposes. Many of the acid dyestuffs have no affinity for cotton, rayon, or acetate rayon; these colors are useful, therefore, in dyeing woolen and worsted unions where white decorative threads are desired.

In cross-dyeing piece goods containing acetate-rayon, the fabric after scouring with olive-oil soap and ammonia is bleached with peroxide. Dyeing is best accomplished in two baths; the acetate rayon is first dyed with the special dyestuffs manufactured for this purpose, and the wool is then dyed in a contrasting shade with acid colors. It is advisable to keep the temperature of the liquor below 180° F. If level shades on the wool are impossible at this temperature, dyeing at the boil with the addition of ammonium sulphate to protect the acetate rayon is recommended.

Dyeing with Vat Colors

The use of vat colors for dyeing wool has a high potential value. As a group, these dyes possess excellent fastness to light, perspiration, and sea water; they are also fast to washing, fulling, and carbonizing. These colors are especially suitable for dyeing uniform cloths, men's wear, carpets, and shoddy. It is stated that wool dyed with vat colors spins better than chrome-dyed wool, that increased speed in weaving is permitted, and that less time is required for fulling. Since vat dyes are applied in an alkaline bath, it is advisable to select those colors which dye at low temperatures with the minimum amount of alkali. In order to prevent damage to the wool fiber, the addition to the bath of glue, sulphite-cellulose liquor, or another protective agent is necessary. The wool, after dyeing, is washed and treated in a weak solution of acetic acid to which a small amount of oxidizing agent may be added. Decatizing or a light steaming further develops the shade.

The indigosols—or water-soluble vat colors—are of some interest to wool dyers for producing light shades of superior fastness to light. While dark shades may be secured with these colors, the cost is prohibitive and the fastness not so marked. The indigosols are applied from an acid bath, followed by an oxidizing process with nitrous or chromic acid.

The napthol colors provide a range of fast, bright shades including orange, red, scarlet, and maroon. These dyestuffs have found considerable application in cotton dyeing, and are now being introduced for wool. They may be applied to loose wool, slubbing, yarn, and piece goods. In dyeing cotton the napthols are dissolved in caustic soda solutions with the aid of Turkey-red oil. Owing to the destructive action of caustic on animal fibers, a modification of this method is necessary in wool dyeing. It has been suggested in this connection that, as in the case of vat colors, a protective agent (sulphite-cellulose liquor) be added to the bath. More recently, however, it has been found that certain of the napthol derivatives in soap solution have an affinity for wool fibers. In using this latter process, the material to be dyed is saturated with a soap solution of napthol to which sodium carbonate has been added; the excess liquor is removed by extracting or squeezing, and the shade developed with the fast-color salt (or base) in the usual manner. The advantages claimed for this method include the production of bright shades, good penetration, and low cost.

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AMERICAN COMMERCIAL RAYON YARNS, GIVING DENIER AND FILAMENT NUMBER

DENIERS	15	25	30	35	40	45	50	52	55	65	75	80	100	120	125	140	150	160	170	175	180	200	240	250	300	360	450	600	900	1200	QUALITIES
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Industrial Rayon Corp.																	30								60						1st and 2nd
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The Belamose Corp.																	22								42		66	66	126		1st and 2nd
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Acme Rayon Corp.																	44								44						1st and 2nd
Delaware Rayon Co.													40				24		24			30			44		60				1st and 2nd
Skenandoa Rayon Corp.																	24														1st and 2nd
Am. Glanzstoff Corp.													40				32-60														1st and 2nd
New Bedford Rayon Co.																	24														1st and 2nd
Am. Chatillon Corp.																	40														1st
II. Nitro-Cell. Process:																															
Tubize Art. Silk Co. of America				8			12				18		20		25	30	30	30		30											1st and 2nd
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III. Acetate Process:																															
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Revised December, 1929, by **COX, FULLER & MAUERSBERGER, Consulting Textile Specialists, 320 Broadway, New York City**

Questions *and* Answers

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

Heavy Places Occurring Regularly in Cotton Yarn

Technical Editor:

We are having trouble with unevenness in single yarn which appears at regular intervals without any change in the machinery. This regular unevenness is noted especially in 38/1 made out of 4.80-hank roving, and we are enclosing a drawing showing the appearance of this yarn on the blackboard.

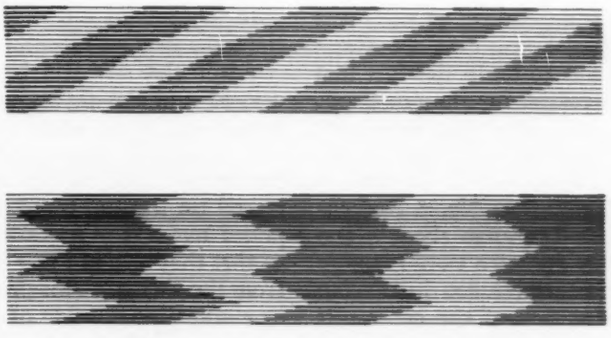
We cannot find the actual cause of this trouble and would greatly appreciate any assistance you could give us in determining it. (7079)

Without actual samples and details of roll diameters and settings, this inquiry must be answered in a rather general way. If the sketch is full-sized, the defect in the lower sample repeats every three inches. As this is just about the circumference of the front roll, it seems possible that the trouble may originate there. A bent front steel roll will cause this trouble. However, this would occur only at rare intervals and then on but a few spindles.

Another cause might be defective top rolls. Sometimes the lap (or joint) of the leather cot of the top roll is very hard, due to excess cement or to cement which dries hard. This causes the top roll to run unevenly and makes uneven yarn. To remedy this, the joint of the cot must be made better. Another way of helping this trouble is to calender all top rolls. Some concerns omit calendering, but it is a question as to whether this is an economical practice, as a small amount of defective yarn will cost more than the calendering.

It would be well to check up on the roll settings, if these defects do not result from the causes already mentioned. Rolls too close often produce cockled work, but rolls too far apart may cause this trouble.

If the defects in the other sample are drawn full-sized, it is hard to explain them, unless it is a top-roll defect in which both the cloth under the leather and the leather itself have poor joints and come about opposite each other.



Unevenness Occurring Regularly in Cotton Yarn

Sometimes hard waste becoming wedged in the gears will cause the difficulty you are experiencing. We suggest also that you examine your gear trains for bad teeth. Worn front-roll bearings or journals may also cause this trouble.

◆

Duties of the Master Mechanic

Technical Editor:

Will you please explain what are generally considered the duties of a master mechanic days, nights, Sundays, and holidays? (7064)

Duties of the master mechanic in a textile mill relate to the following: buildings, process machinery, power-plant equipment, fire-protection system, power-transmission apparatus, lighting system, heating system, humidifying system, service equipment (such as air and water systems), repair equipment, and transportation equipment. Practically all repairs which may be necessary for the dependable operation of all these systems are his responsibility, with the single exception that minor repairs to process machinery are in most cases the responsibility of the departments in charge of their operation.

During hours of plant operation, the master mechanic supervises repair-shop operation, plans repair methods and new work, inspects machinery under his care, and supervises its operation. Nights, Sundays, and holidays he arranges for and supervises emergency repairs when necessary and sees that the plant is under the care of proper lay-over men, such as watchmen and firemen. His responsibilities do not cease with the sound of the whistle at the end of the day's or week's operation period. Rather "they go on forever," as he must see that buildings are safe and comfortable for the start of each operating period, and that all machinery and apparatus are ready for the start on time. He must hold himself read to respond to an emergency call at any and all hours and on holidays.

The proper discharge of the master mechanic's duties often calls for him to procure materials; to design parts (and even whole machines); to draw plans and specifications; to engineer and supervise construction of buildings, streets, and plumbing and sewerage sys-

tems; to lay out power lines; etc. Thus it appears to be imperative that the master mechanic be a rather versatile chap. To be versatile enough to properly discharge these duties requires a prospective master mechanic to obtain all the schooling possible before he starts, and to study hard throughout the balance of his busy life.

◆

Carding a Cotton and Wool Blend

Technical Editor:

I am interested in all problems relating to wool carding, and to the blending of cotton and wool, or any other fibers on wool cards. I was interested in question 7028 of your Dec. 21 issue, and in Edward Pilling's reply in your Jan. 11 issue.

A true carder would not ask anybody's advice if his cards were not ground and set to the best setting he knew. Wool cards are running with cylinder speeds of from 1050 to 1500 ft. per minute. The 10-in. fancies are running 400 to 700 r.p.m. The clothing is generally 50° to 90° pitch, low knee bend or straight, with from 36 to 256 points per square inch. The 30 in. doffer on the breaker runs from 8 to 20 r.p.m. The finisher ring doffers, 9 to 20 in. with from 18 to 40 ends on a doffer, run 5 to 30 r.p.m. on 48-in. cards. The production demanded by mills is from 10 to 100 lb. per hour on 48-in. cards. The cylinder and worker clothing runs from No. 26 double convex to No. 33 standard set for first breakers; 28 double convex to 36 regular for finisher. The eccentric shafts of condenser are running from 200 to 600 r.p.m.

You cannot card some blends of cotton and wool with clothing used to card dirty carpet wools. You cannot get the best results in carding cotton and wool blends by using the standard settings of wire used in card clothing for wool.

In the details which I have given above, I have mentioned the extremes which I have personally experienced, and any carder might be working at one or the other. Ninety per cent of the troubles of carders with cotton and wool blends are caused by uneven moisture content of stock and not having the proper card clothing.

Enclosed please find three samples of stock as it comes from the first breaker. They are the same stock with different percentages of peeler cotton and fine carpet wool. They are from 25-lb. samples, run in order, 1, 2, 3. How would you remedy No. 3?

Would like you to give me an idea of what you would consider a good layout for a three-card set of 48 x 60 in. diameter on three-run wool and cotton mix, 50% Texas wool and 50% double carded Peruvian cotton (one run—60% rag picked sweater clips and 40% peeler cotton). What production would you expect? (7084)

Samples No. 1 and 2 have the appearance of not being carded sufficiently to blend the mixture of wool and cotton properly. The fault seems to lie in the fact that the wire on the breaker is too coarse for the fine-staple cotton. The wool used has some very long fibers and requires thorough blending to combine with the fine fiber of the cotton.

It is the writer's opinion that sample No. 3 contains a percentage of garnetted cotton or rayon shoddy, and that the pills or nibs so much in evidence were made in the garnetting. These cannot be eliminated in carding regardless of how good the condition of the cards. It seems advisable to remedy the fault in the garnetting or to use a good-staple comber or cotton in place of the garnetted stock.

A good practical layout for a three-card set which should prove satisfactory for carding the grades of stock mentioned, and for carding fine and medium grades of clothing yarns is as follows:

Metallic Breast. First breaker clothed throughout with No. 30 wire. Fancy clothed 26/30 open set, straight tooth, wire 1½ in. in length, set in leather.

Second breaker and finisher connected, with the diagonal feed on second breaker. Second breaker clothed throughout with No. 32 wire; No. 26/30 open-set fancy, same construction as that of first breaker.

Finisher clothed throughout with No. 35 wire. No. 28/32 open-set fancy, same construction as those on the breakers. Main-cylinder speed, 70 to 72 r.p.m.; fancy speed which will best accommodate the proper handling of the stock in process. A two-bank tape condenser, four spools, twenty ends per spool.

Production on the three-run yarn mentioned should be from 40 to 50 lb. per hour, and 90 to 100 lb. on the one-run yarn. We would advise that the wool be oiled and run through the picker once before mixing with the cotton.

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Tussah Silk Splits in Winding

Technical Editor:

We are handling large amounts of tussah silk and are experiencing trouble with bad splitting of this fiber in winding and spinning. Ordinary soaking with oil is not believed of benefit. Can you offer any suggestions that will help in this matter? (7060)

Some of the characteristics of tussah silk that cause difficulty in winding and spinning are the lack of thread cohesion, the solubility of the sericin, and the presence of gum or reel markings on the skeins. As a rule, tussah threads are reeled from eight cocoons. It often happens that one of these fibers may be gummed down and split off in unwinding. One of the best oils to prevent splitting is neatsfoot oil. For 100 lb. of tussah about 8 pints of oil are required. The skeins are removed from the books, but not opened, and the oil is sprayed on the silk by means of a soft camel-hair brush. Care must be taken that the oil is distributed evenly over the entire lot.

Extensive experiments show that tussah silk needs about 8% of oil to procure the best working results. Starch and paraffin wax are also used with the oil. This has a tendency to make the ends smooth and to give a coating to the threads, thus helping in the spinning and winding. A formula often used for soaking consists of 17 lb. of neatsfoot oil and 3 lb. of starch. Another recipe calls for 2 lb. of paraffin wax melted and mixed with 12 pints of oil. These mixtures may be applied in the same manner as outlined for the straight oil.

After the silk has been sprayed, it is ready to be opened and the skeins hung over poles. It is best to have small poles, about 1½ yd. long and 1½ in. in diameter. After the skeins are steamed, they are taken out of the steamer and carried to the winders. Here they are placed on the top of the winding frame and the sticks pulled out. It is necessary for the sticks to be smooth so that they will not tear the silk when they are removed from the skeins. This procedure saves an extra handling by eliminating opening of the skeins when the oil is being sprayed; it also protects the ends, and thus aids in wind-

ing. The skeins should be steamed with dry steam from 10 to 15 min. at a pressure of about 15 lb. On removing the skeins from the steam box, the gum is pulled apart, not rubbed. The more uniformly the oil is applied the less are the number of breaks. A thread speed of about 165 yd. per min. is the most efficient. The breaks vary from 80 to 600 on 300,000 yd. By careful treatment before winding, it is possible to reduce the breaks to a minimum. The open condition of the thread will not permit fast speed. Quick traverse and large-barrel bobbins should be used in all departments, as in this way the threads do not lie so close together. The winder guides should be examined to see that they are not cut, and a small weight may be hung on the winder-swift so that the thread will wind tightly on the bobbin. This will assist in the subsequent doubling operation.

Either the down-spinning method or the 5-B combined doubling and spinning gives good results. The latter method may operate at a spindle speed of from 2,000 r.p.m. to 3,000 r.p.m. Cocoon fibers sometimes split off and run around the feed rolls, but this difficulty may be minimized by reducing the clearance between the rolls. If eight turns are required, it is always best to put in two turns on the 5-B spinners, and then take the bobbins from these machines and put them on a spinner with no flyer. When operating without a flyer, the spindle speed may be increased to 9,000 or 10,000 r.p.m. Care must be taken on the 5-B spinners not to run the bobbins too full. If the ends run together on the spinners, this is overcome by putting tin between the bobbins.

To prevent split ends, when the silk is ready for reeling, the bobbins and reel caps should be examined to make sure that they are not cut. The drop-wires on the reels and the reel-flyers should also be inspected. The latter must be smooth so that when removing the silk there will be nothing to catch the fibers and split the ends. While being bundled the silk should be examined for damage in order to discover the nature and cause of any defects.

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Glazing Fine Yarn

Technical Editor:

We would appreciate it if you could furnish us with a correct formula for glazing fine numbers of yarn for the neckware and furrier trade. At present we are using a very good grade of cotton yarn, but it seems that our glazing is not satisfactory, as we are receiving complaints that our thread does not work well on sewing machines. We are enclosing a sample of our yarn glazed according to the following recipe:

Formula for 50 Gal.

Bluestone	*1 oz.*
Common salt	*½ lb.*
Borax	*½ lb.*
Coconut oil	*1 qt.*
Paraffin Wax	*½ lb.*
Ground glue	*3 lb.*
Yellow dextrin	*3 lb.*
Tapioca flour	*10 lb.*
Potato flour	*8 lb.*

This batch is kept for two to three days in a wooden barrel. We are using a wooden size box and it is cleaned every three to four days. *(7069)*

An examination of the glazed yarn submitted by the inquirer shows that it is sticky and contains considerable excess dyestuff and common salt. This condition, which is caused by insufficient washing of the yarn after dyeing, results in the size solution becoming contaminated. As the size gets older, the concentration of the salt increases, and the yarn picks up larger and larger quantities of the salt. With this condition, it is impossible to secure good results in glazing; and in some cases sufficient salt is taken up by the yarn to cause white crystals to appear on drying or even to rot the thread on storing. Thread finished as is the sample has too much drag, and when used on sewing machines is liable to kink and break the needle.

To remedy this defect the first step is to make certain that the yarn is thoroughly washed after dyeing. The formula used by the inquirer also requires a few modifications to insure the best results. The following recipe has been found satisfactory for this class of work:

Formula for 50 Gal.

Bluestone	1 oz.
Common salt	6 oz.
Borax	½ lb.
Coconut oil	1 lb.
Paraffin wax	1¾ lb.
Ground glue	2 lb.
Yellow dextrin	2½ lb.
Potato starch	9 lb.
Tapioca flour	9 lb.

The most important change in the formula is the increased amount of paraffin wax. The size should not be kept longer than 48 hours. After this time decomposition begins, the solution loses its sizing properties, and the yarn acquires a dead look and dull finish. We are enclosing a card on which is wound a portion of the yarn submitted, together with a sample of 50/3 yarn, finished according to the formula given above on material which was thoroughly washed after dyeing. It will be noted that the 50/3 sample has a bright appearance and smooth feel as compared with the dullness and stickiness of the other.

◆

Non-Run Knitted Fabric

Technical Editor:

Can you tell me if there is being a so-called non-run cloth knit on circular underwear machines similar to the enclosed sample without much change in appearance? If so, could you give me an idea of how it is made?

(7065)

The enclosed sample is a piece of filling-knit fabric. We know of no fabric of this type which can rightly be called "non-run" cloth. While a very closely constructed filling-knit fabric will resist running to a certain extent, it cannot really be considered "non-run." There are combinations of tuck stitch which will prevent runs in one direction, but these will change the appearance of the fabric a great deal in some cases. The only truly run-proof cloth is that knitted on the warp-knitting machines, such as the tricot and milanese types.

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We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. We do not undertake routine analysis of woven or knitted fabric construction, or investigation involving unusual expense.

All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld. —EDITOR.

NEWS about MEN

HENRY P. KENDALL, president and treasurer, The Kendall Co., Boston, Mass., will deliver the opening address of the National Management Congress, at the Stevens Hotel, Chicago, Ill., March 3, on the subject, "The Development of the Art and Science and Philosophy of Management Since Taylor." Mr. Kendall is president of the Taylor Society.

JOHN E. ROUSMANIERE has been elected president of the Cabot Mfg. Co., Brunswick, Me., succeeding JOHN W. FARWELL, deceased.

GEORGE J. SWIFT has been elected president of the Springfield (Tenn.) Woolen Mills, Inc.

WILLIAM THORBURN, president of Lowe Donald & Co., Inc., Peebles, Scotland, and his brother, ROBERT THORBURN, director of Walter Thorburn & Bros., Ltd., also of Peebles, woolen manufacturers, who have been visiting eastern textile centers for the last few weeks, looking over prospects for Scottish woolen business in this country, made an inspection of the Salisbury Mills in the old B. B. & R. Knight plant in Manchaug, Mass., on Feb. 8. With them was a brother JAMES G. THORBURN, New York, president of Lowe Donald & Co., New York and Boston, and DR. ERNEST E. SMITH, head of the Salisbury Mills, which were until recently located in Worcester, Mass.

YORK WILSON, president and treasurer of the Red River Cotton Mills, Rock Hill, S. C., is no longer connected with the cotton firm of William & York Wilson, at Rock Hill.

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E. KENT HUBBARD, president of the Manufacturers Association of Connecticut, of Hartford, sailed on Feb. 15 for Europe, to determine the present and future sales possibilities offered by the European countries to Connecticut products.

THEODORE T. ELLIS, president and treasurer of the New England Fibre Blanket Co., Worcester, Mass., has been elected president and treasurer of the Royal Worcester Corset Co., of that city. Among those elected directors in addition to Mr. Ellis are DR. HOMER GAGE and JOHN F. TINSLEY, president and vice-president and general manager, respectively, of the Crompton & Knowles Loom Works, Worcester, and HARLAN T. PIERPONT, treasurer of the Worcester Silk Mills Corp.

CHARLES V. VERNER of the Piedmont Mills was elected president of the Southern Textile Athletic Association at its recent meeting held in Greenville, S. C. Other officers elected were: J. D. BROWN, of Monaghan and J. D. BROWN of Chicopee mills, vice-presidents; J. H. GARREAUX of Judson, secretary, and LEONARD HOWARD of Dunean mills, treasurer.

DANIEL H. CONWAY, mayor of Oswego, N. Y., and president of the Conway Knitting Mills and GROVER C. BOYCE, general manager of the Oswego Shade Cloth Co., were elected directors of the Chamber of Commerce of Oswego at the annual meeting held on Feb. 10.

GEORGE D. HORST, head of the Nolde & Horst Hosiery Co., Reading, Pa., has been elected a trustee of Albright College, Reading.

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At the annual stockholders meeting of the Aragon-Baldwin Cotton Mills, Inc., held in Chester, S. C., Feb. 11, the following directors were elected: ALEX LONG, Rock Hill, S. C.; S. M. JONES, ROBERT GAGE, and T. H. WHITE, all of Chester, S. C.; J. E. SIRRINE, R. E. HENRY and R. G. EMERY, all of Greenville, S. C.; NATHANIEL STEVENS, No. Andover, Mass.; R. T. STEVENS, W. J. GALLON and DAVID JENNINGS, all of New York City. The board of directors elected the following officers: ALEX LONG, chairman of the board; DAVID JENNINGS, president; R. E. HENRY, vice-president; WILLIAM FRASER, New York, treasurer; E. O. HUNTER, of Chester, secretary; E. R. LUCAS, of Chester, assistant treasurer; E. O. HULL, of Rock Hill, assistant treasurer; J. G. BARNWELL, Whitmire, S. C., assistant treasurer.

TEXTILE CALENDAR

Alabama - Mississippi - Louisiana Division, S.T.A., Regular meeting, Montgomery, Ala., Feb. 28, 1930.

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Committee D-13, American Society for Testing Materials, Spring Meeting, Charlotte, N. C., March 13-14, 1930.

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Southern New England Textile Club, New England meeting, Providence-Biltmore Hotel, Providence, R. I., March 15, 1930.

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Southern Textile Association, Carders' Division, spring meeting, Clemson College, S. C., March 21, 1930.

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Cotton Manufacturers Association of Georgia, Annual Meeting, Atlanta-Biltmore Hotel, Atlanta, Ga., April 3-4, 1930.

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Southern Textile Association, Master Mechanics' Division, Spring Meeting, Charlotte, N. C., April 24, 1930.

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International Exposition, Textile Exhibitors Association, Mechanics Building, Boston, Mass., April 28-May 3, 1930.

•

National Association of Cotton Manufacturers, Annual Meeting, Copley-Plaza Hotel, Boston, Mass., April 30-May 1, 1930.

•

American Cotton Manufacturers Association, Thirty-fourth Annual Convention, Carolina Hotel, Pinehurst, N. C., May 12-14, 1930.

•

Knitting Arts Exhibition, Commercial Museum, Philadelphia, May 12-16, 1930.

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National Association of Hosiery and Underwear Manufacturers, Annual Meeting, Philadelphia, May 14, 1930.

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National Knitted Outerwear Association, Annual Meeting, Toronto, Canada, June, 1930. (Exact date not yet set.)

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Southern Textile Association, Annual Meeting, Ocean Forest Hotel, Myrtle Beach, S. C., June 27-28, 1930.

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Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

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Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.

WILLIAM R. HAYTOCK, president of the Haytock-Cronemeyer Co., Easton, Pa., fell into an elevator shaft at the Haytock mill recently and was badly injured.

CHARLES J. WEBB, prominent wool merchant and textile manufacturer, who died Feb. 10, at his home in Elkins Park, Pa., left the bulk of his estate to his three sons, E. EDWIN WEBB and HERBERT K. WEBB, associated with Chas. J. Webb & Sons Co., Inc., and ANDREW S. WEBB, president of S. B. & B. W. Fleisher, Inc. Mr. Webb had made large donations to various charities in which he was interested during his life. C. EDWIN WEBB stated that his father's interests in these institutions will be carried on by the sons. In addition to these Mr. Webb left sums to employes in his household who had been with him for many years. Total of the Webb estate has not been announced but it will amount to several million dollars.

Directors of The Woodside Cotton Mills Co., Greenville, S. C., were elected at the annual stockholders meeting, Feb. 14, as follows: J. D. WOODSIDE and MR. THACKER, New York, N. Y.; JOHN T. WOODSIDE, E. F. WOODSIDE, R. I. WOODSIDE, A. G. FURMAN, JR., GEORGE NORWOOD, J. E. SIRRINE and J. LEE CARPENTER, all of Greenville. Officers were re-elected at a meeting of the board of directors.

H. E. MACHOLD, vice-president of the Skenandoa Rayon Corp., Utica, N. Y., was elected chairman of the board of directors of the Northern New York Trust Co. at the annual organization meeting.

W. C. BATES, who for several years has been in charge of the New York offices of Cannon Mills, has been elected vice-president of Cannon Mills of North Carolina.

ROBERT R. WEST, treasurer, secretary and agent for the Lancaster Mills, Clinton, Mass., has resigned to become vice-president and production manager of the Riverside & Dan River Cotton Mills, Inc., Danville, Va., on March 1.

ROBERT A. BARTLETT, treasurer at the Acushnet Mill, New Bedford, Mass., since Nov. 21, 1924, will leave the employ of the corporation some time this month, to take up his new duties as secretary-treasurer of the Priscilla Mills, Inc., Gastonia, N. C., on March 1.

ALLAN BARROWS was re-elected treasurer of the Gosnold Mills Corp., New Bedford, Mass., at the annual meeting of stockholders held Feb. 11. Directors elected were: HENRY H. CRAPO, HENRY S. KNOWLES, CHARLES L. HARDING, HENRY A. WYMAN, LAURANCE D. CHAPMAN, STANFORD T. CRAPO, JOHN M. BULLARD, ALLAN BARROWS and JOHN L. EMORY.

EDWARD H. COOK was re-elected treasurer of the Quissett Mills, New Bedford, Mass., at the annual meeting of the corporation. THOMAS F. GLENNON was re-elected agent, and JAMES F. BACON, clerk.

CHARLES M. HOLMES, treasurer and agent of the Holmes Mfg. Co., New Bedford, Mass., has tendered his resignation. He has been employed for this company since 1909. Mr. Holmes is succeeded by DANIEL R. WEEDON.

GEORGE W. POPE was re-elected treasurer of the Whitman Mills, New Bedford, Mass., at the annual meeting of stockholders held Feb. 11.

E. KENT SWIFT, treasurer of the Whitin Machine Works, Whitinsville, Mass., has been elected president of the Nyanza Mills, Woonsocket, R. I., succeeding JOHN W. FARWELL.

C. V. BOWES has resigned as treasurer of the Utica (N. Y.) Textile Co., in order to take an executive position with a firm in Rochester.

W. H. BAKER, secretary of the Oneida Bleachery Co., New York Mills, N. Y., has been elected vice-president of the Textile Social Club of that place, which was recently organized for welfare work.

THEODORE FRIEDLANDER, secretary of the Phoenix Hosiery Co., Milwaukee, Wis., was elected to the board of directors of the Milwaukee Association of Commerce at the annual meeting of that organization on Feb. 4. Mr. Friedlander was elected for a term of three years.

HOWARD R. WHITEHEAD, agent of the Pepperell Mfg. Co., and Mrs. Whitehead, sailed Feb. 15 from New York for a vacation trip. They plan to visit Cuba and also to go through the Panama Canal before returning home in March.

JAMES M. MORTON, for ten years agent of the plant of the American Woolen Co., at Thamesville, Norwich, Conn., has been transferred to the mill of the same concern at Maynard, Mass. Mr. Morton was previously agent of the mills at Yantic, Conn.

ERWIN N. DARRIN, assistant agent for the Draper Corp., Hopedale, Mass., is on a southern trip.

J. NORMAN PEACE, manager of the Charlotte, N. C., office of the Lockwood Greene Engineers, Inc., has been chosen president of the Southern Manufacturers Club, of Charlotte.

J. GUYON CLARK, general manager of the American Textiles, Inc., Bay City, Mich., was recently named a director of the Hosiery Guild, Inc., of which D. L. GALBRAITH, president of the American Textiles, Inc., is head.

EARLE L. MILLIKEN, formerly manager of the Belamose Corp., Rocky Hill, Conn., was elected president of the Waypoyset Mfg. Co., Central Falls, R. I. He had been vice-president of that company since April, and was long associated with Stone & Webster, Inc., Boston, Mass.

J. R. PROFFITT, who for the last several years has been manager of sales promotion

Philip LeBoutillier, President of Best & Co., New York. Recently Elected President of National Retail Dry Goods Association

of the Mode-Modeled Division of Westcott Hosiery Mills, Dalton, Ga., has been appointed director of advertising of the Fabrimode Costume Hosiery Division of Westcott Hosiery Mills and will have under his direction the advertising and sales promotion of all style groups of Fabrimode Costume Hosiery both in this country and abroad.

HORACE E. HARMON, formerly of Philadelphia, Pa., has been named South Carolina representative of L. Sonneborn Sons, Inc., New York, N. Y., it was recently announced by Samuel G. Slavin, sales manager of that concern.

G. G. SIMMONS, formerly of Greenville, S. C., has accepted the position of cost accountant at the Watts Mills, Laurens, S. C.

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Cotton Products Co., Philadelphia, Pa., has transferred N. P. MURPHY from its sales office in Greensboro, N. C., to its main office. JAMES WITHERSPOON has been appointed by Cotton Products Co., to cover the Carolinas with headquarters in Greensboro. C. C. HARDING is in charge of the Greensboro office.

DAVID POSNACK, Three Rivers, Can., former chemist for the Southbridge (Mass.) Finishing Co., has accepted a similar position in a mill at Rock Hill, S. C.

H. L. HARRIS, formerly with the Golden Belt Mfg. Co., Durham, N. C., is now employed by the Galax (Va.) Knitting Co.

J. O. BLACKMON has resigned as superintendent of the Southern Mfg. Co., Athens, Ga., and is succeeded by S. B. MCELVEEN.

A. B. CROSS has assumed his new duties as general superintendent of the Rock Hill (S. C.) Printing & Finishing Co. He was promoted to this position from that of head of the printing department.

EDWARD DAVENPORT, superintendent of dyeing for Sidney Blumenthal Co., Shelton, Conn., has severed his connections with that company. He is succeeded by JAMES E. LAWTON who has been with that company for the last 15 years.

MACK HAYES, formerly superintendent of the Cherryville (N. C.) Mfg. Co., has entered upon similar duties at the Howell Mfg. Co., of the same place.

JOHN LAUX is the new superintendent of Asheville (N. C.) Hosiery Co.

W. L. PHILLIPS has been promoted from superintendent of the Stroud-Holcomb Cotton Mills to general manager at Birmingham, Ala., branch of the company.

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M. E. SCHEDLBAUER, formerly superintendent of the cotton yarn department of Stephen Sanford & Sons, is now proprietor of the Amsterdam (N. Y.) Auto Laundry Co.

GEORGE H. SHUTT, formerly in the employ of the Old Colony Silk Corp., New Bedford, Mass., as plant superintendent, has entered the employ of the Eastern Canada Silk Corp. He is to have charge of manufacturing of the new plant to be erected in Sherbrooke, Que., operating 240 looms and employing about 500 hands.

L. F. WATSON has been elected superintendent of the newly organized Griffin (Ga.) Mfg. Co.

R. L. BURKES has been appointed overseer of weaving at the Thomaston (Ga.) Cotton Mills. He formerly was associated with the Stroud-Holcomb Mills, Birmingham, Ala.

W. J. BENNEFIELD, of Winnsboro, S. C., is now overseer in the card room at Watts Mills, Laurens, S. C.

R. DAVIS has resigned as head of the night spinning department of the Ruby Cotton Mills, Gastonia, N. C.

J. M. MILTON, formerly of Gadsden, Ala., is now overseer of spinning at the Martha Mills, Thomaston, Ga.

HUGH J. GOURLEY, former overseer of carding at the Berkshire Mills, Adams, Mass., has been appointed assistant instructor in carding and spinning at the New Bedford Textile School, where he succeeds RICHARD GREEN.

CHARLES J. HENAULT, JR., has taken the position as overseer of dyeing and chemist for D. E. Cummings Co., Skowhegan, Me.

JOE KIRBY, formerly of Lowell, N. C., is now overseer of weaving at the Langley, (S. C.) Mills.

S. L. JENKINS has resigned his position as overseer of weaving at the Scottdale (Ga.) Mills to accept a similar place in Thomaston, Ga.

MR. and MRS. GEORGE W. MELDRUM, Clinton, Mass., observed their 50th wedding anniversary on Feb. 15. Mr. Meldrum has been boss dyer at the plant of the Bigelow-Sanford Carpet Co. at Clinton for the past 20 years, and was previously associated with the concern as assistant overseer and in other capacities.

J. W. RAYFIELD is now master mechanic at the Hillcrest Silk Mills, High Point, N. C.

C. P. ROBERTS, overseer of carding at the Watts Mills, Laurens, S. C., has resigned.

NEWS about MILLS

Cotton

Eva Jane Mill, Sylacauga, Ala., of the Avondale group, will turn out a new line of slip-cover materials with friction calender finish, as soon as equipment is provided.

Autauga (Ala.) Cotton Mills, manufacturing cotton trouserings, awnings, cottonades, etc., are running both night and day shifts, 60 hours per week for each shift.

Connecticut Mills Co., Danielson, Conn., has completed the removal of machinery to the plant at Decatur, Ala., which will be installed as soon as possible.

Clearwater Mills No. 3, at Atco, Ga., have announced a reduction in working time for all operatives from 60 to 55 hours weekly. The plant is at present working full time, day and night. The same order is to be effective at the Rockmart and Cedartown mills, it is understood.

***Griffin (Ga.) Mfg. Co.** is changing its equipment for the manufacture of broadcloths 36 to 40 in. wide, and it is expected that operations will begin within the next three weeks. Approximately 50,000 spindles, part of which is new equipment, will be operated. Several spinning frames, dyeing, finishing and napping machinery are being discarded, it is understood.

Georgia-Kincaid Mills, Griffin, Ga., are now running only four days a week.

Hillside Cotton Mills, La Grange, Ga., manufacturers of bedford cords, sateens and colored specialties, have increased operating schedule from five to five and one-half days a week, operating night and day.

Westbrook (Me.) Twine Mills have discontinued at Westbrook and are now operating under the name of **Wedco Twine Mills,** 210 Broadway, Everett, Mass. G. R. Edelstone, proprietor; William W. Edelstone, general manager and buyer. The mills manufacture kite and household twines and use 13/3/3-23/4/3-23/5/3 short end and knotted cable cord.

Lancaster Mills, Clinton, Mass., will hold their annual stockholders meeting in Boston on Feb. 21 to consider either raising additional capital, or complete liquidation of the assets. It is intimated that liquidation is the most likely step to be taken. Notice of the meeting sent by the directors sets forth the condition of the mills and the reasons for liquidation. The working capital has been reduced to $180,000 and the notice states that it is apparent the mills cannot continue to operate even at their present limited schedules. The directors believe that to continue to operate would be an unwarranted risk. Amory, Browne & Co., New York and Boston, selling agents decline to advance further funds to keep the mills going.

*Indicates previous mention of project.

Union Cotton Mfg. Co., Fall River, Mass., has awarded general contract to Beattie & Cornell, Fall River, for improvements in boiler house at mill, including new roof, etc. A building permit has been issued for the work.

***Beaver Mills,** North Adams, Mass., have dismantled their plant and sold it to the Sprague Specialty Co., Quincy, Mass., electric supplies.

Greylock Mills, Williamstown, Mass., which also operate cotton mills in adjacent towns and at North Pownal, Vt., have closed their North Pownal mill indefinitely. The company recently increased its schedule from 48 to 56 hours a week.

Ellenboro (N. C.) Mfg. Co., which was established about five years ago for the manufacture of bedspreads, napkins, table cloths, etc., has been leased to Bliss, Fabyan & Co., New York. The plant operates about 8,000 spindles and 40 looms.

***Taylorsville, N. C.** Three carded yarn mills located in and near Taylorsville were sold at auction Feb. 10 by trustees in bankruptcy, to W. L. Nicholson, of Charlotte, N. C. Liledoun Mfg. Co. was sold for $21,500; Taylorsville Mfg. Co., for $36,500; and the Miller Mfg. Co. for $55,000; sale of all three plants subject to liens amounting to about $41,000. The plants have been closed for several months.

Monarch Mills, Union, S. C., have purchased 800 Draper 40-in. automatic looms which will be installed in their Lockhart plant, replacing an equal number of old looms.

Texas Textile Mills, Inc., Waco, Tex., have adopted a full production schedule on a 12-hr. working day basis, both at cotton and twine mills, giving employment to full working quota, and will continue on this schedule for some time to come. For the last six weeks, the plant has been running on a 4-day week schedule. H. S. Clark is manager.

Wool

Hockanum Co., Rockville, Conn., has awarded a number of sub-contracts through the Manchester Construction Co., South Manchester, for proposed new two-story addition to its local American Mill.

Maine Spinning Co., Skowhegan, Me., plant is soon to be on a full-time schedule, according to Charles Turner, superintendent.

***Felters Co.,** Millbury, Mass., has superstructure in progress for proposed new addition to dye house, and it is expected to have the structure ready for service at an early date. A number of sub-contracts have been let for roofing, painting and other finishing work.

Ricketts & Shaw, Monson, Mass., have resumed night work in their No. 2 mill.

A. D. Ellis Mills, Inc., Monson, Mass., have discontinued night work in all departments of their No. 3 mill.

***Hamilton Woolen Co.,** Southbridge, Mass., has sold seven mill buildings, known as the "Print Works" to A. Edmond Richard. All the buildings are three-stories high of brick construction and have not been used by the Hamilton company since operations were centralized on Mill St.

Salisbury Mills, Inc., which recently moved equipment from their Worcester, Mass., plant to the B. B. & R. Knight mill at Manchaug, Mass., are now operating about 36 automatic looms on English-type worsteds. The plant has a capacity for 400 broad looms and dye and finish equipment.

Superior Felt Products Co., Inc., Flint, Mich., capital $150,000, manufacturer of wool felt, has started a mill at Grand Blanc, Mich., and moved the machinery from the plant of Joseph Wild & Co., Brooklyn, N. Y.

Harris, Emery Co., Penacook, N. H., has adopted a full time production schedule with regular working force, following a 3-day week basis for some time past. It is expected to hold to capacity for an indefinite period.

Mohawk Carpet Mills, Inc., Amsterdam, N. Y., have plans under way for a two-story boiler house, reported to cost over $100,000, with equipment. Bids will be asked at an early date. C. W. Becker, Elm St., Amsterdam, is architect and engineer.

E. K. Bready (Girard Worsted Mill), Philadelphia, Pa. Voluntary petition in bankruptcy has been filed by this concern, manufacturer of worsted, cotton and woolen dress goods, Howard & Huntingdon Sts. No schedule was filed. Referee, David W. Amram.

Pawcatuck Woolen Mill, of Potter Hill Woolen Co., Inc., Westerly, R. I., has been sold to John Quinn, of Philadelphia, who will take possession about March 10. It is expected that operations will begin the latter part of March.

Dunn Woolen Co., Martinsburg, W. Va., manufacturer of automobile upholstery cloth, resumed operations last week on a three-day week schedule. The mills have been idle since last September due to over production.

Knit

Millerknitwear, Inc., Baltimore, Md., is the new name of Millerknit, Inc., which was organized about a year ago to succeed **R. G. Henry & Co.**

Carpenter-Colquitt Co., Shelby, N. C., has been issued a charter by the Secretary of State to manufacture and otherwise deal in knit goods. The concern is capitalized at $50,000, with $3,000 paid in. Following are its incorporators: R. E. Carpenter and C. R. Colquitt, of Shelby, and M. A. Carpenter of Gastonia, N. C.

Rotary Knitting Mills, Inc., Vineland, N. J., recently organized with a capital of $100,000, to operate a local mill, will be headed by Maxwell, Frank and Benjamin Krich, all of Vineland. The company is represented by M. J. Greenblatt, Vineland, attorney.

Julius Kayser & Co., New York, are pushing work on their new silk hosiery mill at Melbourne, Australia, and will equip the initial unit for an output of 1,000 pairs per week.

Manny-Rielly Co., Valatie, N. Y., manufacturer of women's rayon underwear, has leased the building formerly occupied by **Bristol (Tenn.) Hosiery Co.,** and will remove the plant to Bristol within a few weeks. It is expected approximately 300 operatives will be employed in the new industry when the plant reaches full capacity.

Olga Knitting Mills, Watertown, N. Y., have resumed operations on a full time basis, turning out wool, cotton and rayon polo shirts.

***Shaughnessy Knitting Co.,** Watertown, N. Y., denies report that its plant would be moved to Oswego, besides announcing that it is running as usual with a normal working force.

Asheville (N. C.) Hosiery Co., recently acquired by Theodore Y. Rodgers, of Philadelphia, and D. R. Baer, treasurer, is planning an expansion program calling for double the amount of present machinery, which will be delivered during the next six months.

Pilot Hosiery Mills, Lexington, N. C., will be moved to Asheboro in the next 90 days. The plant will occupy the Ross brick building. A dye house and boiler room will be immediately constructed by Arthur Ross, owner of the building which has room for 300 machines; 100 will be installed at once.

Lyerly Full-Fashion Mill, Inc., Hickory, N. C., has been chartered for the manufacture of hosiery and other knit goods. Authorized capital stock is $500,000, with $3,000 subscribed by B. Lyerly, C. L. Lyerly and R. L. Bothwell, all of Hickory.

Alderwood Knitting Mills, Portland, Ore., will add light-weight featherwool coats to their line of sweaters, and will install several new knitting machines. When the $50,000 worth of new equipment is added it is expected to put the mill on a full-time working basis.

Jantzen Knitting Mills, Inc., Portland, Ore., are asking bids on a $20,000 building to be constructed at Jantzen Center, to be used as a club and recreation center for employes. The building will be two-stories, 30x75 ft.

***Ashland (Pa.) Knitting Mills,** manufacturers of fine knit underwear, are a branch of the Reidler Knitting Mill, at Hazelton, Pa., and have no connection with the Schuylkill Haven (Pa.) Knitting Mills, damaged by fire, as recently reported.

Cambria Silk Hosiery Co., Philadelphia, Pa., manufacturer of full-fashioned hosiery, has recently installed new fine gauge machines. The company announced that it is working on full time schedule.

*Indicates previous mention of project.

London Knitting Co., Inc., Philadelphia, Pa., recently chartered with a capital of $25,000, will take over and succeed to the **London Knitting Mills,** with plant at 321 North Eighth St. Sol Shapiro has been elected treasurer of the new organization.

West Chester (Pa.) Hosiery Mills Co., Inc., recently organized, care of Clarence E. Wunder, 1520 Locust St., Philadelphia, Pa., architect, is completing plans and will take bids at once on general contract for a one-story knitting mill at Garfield St. and Lincoln Ave., West Chester, estimated to cost close to $45,000, with equipment. Mr. Wunder is in charge of the project.

Eaton Knitting Co., Ltd., Hamilton (Ont.) Can., will enlarge its mill on John St., according to J. S. McCaughey, manager. The cost of the proposed two-story addition is estimated at $200,000.

Springstead Knitting Co., Simcoe (Ont.), Can., will move its plant and equipment from Simcoe to Galt sometime during March.

Silk

Henry Bauer, Lawrence, Mass., manufacturer of silk novelties, has leased the third floor of the Pemberton Mills building, acquiring 24,000 sq.ft. of floor space for the extension of operations.

Tirrell Bros. Silk Corp., Milford, N. J., has placed a wage reduction into effect, amounting from 1 to 1½c. per yd. A new plan of loom operation has been adopted which is expected to offset the reduction for operatives, more work being required, however, to bring about the same amount per day.

J. A. Migel, Inc., North Bergen, N. J., has disposed of its modern four-story silk mill on Hudson Blvd., near Charles St., totaling about 100,000 sq.ft. of floor space, to the Theurer Wagon Works, Inc., 10th Ave. and 56th St., New York, which will take over the property at once. The mill was built in 1914, and is said to represent an investment of $800,000.

Onondaga Silk Co., Inc., operating plants at Syracuse and Ogdensburg, N. Y., has retired all preferred stock in exchange for common, increasing the firm's working capital by $150,000, according to B. C. Milner, Jr., president.

Lancaster (Pa.) Silk Mills, Inc., have arranged for an increase in capital from $50,000 to $70,000.

Stemton Silk Co. has reopened its mill at Mauch Chunk, Pa. It is expected that the company's two mills in Northampton, Pa., will also resume operations in a short time.

Northwest Silk Mills, Inc., Tacoma, Wash., filed articles of incorporation Feb. 6 with a capital stock of $50,000. Incorporators are given as Albert R. Butterworth, Henry Butterworth and E. S. Watts.

Silk Mills of Canada, Ltd., formerly **Marigold Silk Mills, Ltd.,** of Acton-Vale (Que.), Can., capital $1,000,000, manufacturers of crepe de chine, georgette and rayon, are constructing an addition to their plant and work is now well under way. Plans call for a one-story structure of concrete, brick and steel, 146x120 ft. The present plant has 1,000 spindles and 100 looms. David Miller is president and Morris Gold, treasurer.

Rayon

Industrial Rayon Co., Cleveland, Ohio, is beginning an alteration and improvement program at its mill at Walford Ave., and West 98th St., for which general contract recently was let to the George A. Rutherford Co., 2725 Prospect Ave., estimated to cost $100,000. A new roof will be placed on the textile and spinning mill units. Christian, Schwartenberg & Gaede Co., Union Bldg., Cleveland, are architects.

***Viscose Co.,** Parkersburg, W. Va., has construction work on the second unit well under way, and a portion of the first story walls is up. It is expected that part of the addition will be ready for equipment by the end of the year and operation will start by March, 1931.

Finishing

Chatham Piece Dye Works, Inc., Paterson, N. J., recently chartered with a capital of $100,000, to operate a local mill, will be represented by Stein & Stein, 126 Market St., Paterson, attorneys. The incorporators include William G. Sheps, Paterson, and Samuel Forman, Newark.

Quality Piece Dye Works, Inc., Woonsocket, R. I. A final meeting of creditors was held on Feb. 4; the account of the trustee in bankruptcy was allowed, and the business definitely closed.

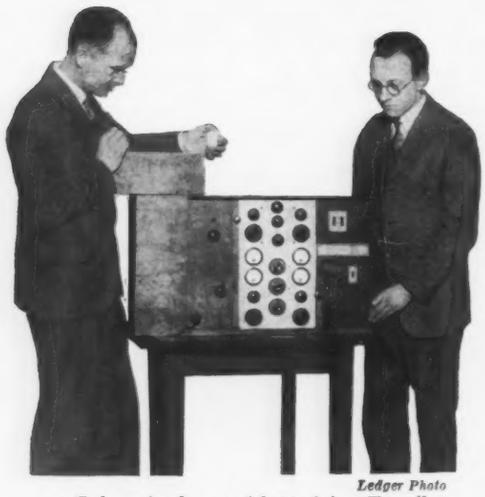
Miscellaneous

Sealy Mattress Co. of Arkansas is the name of the former **Little Rock (Ark.) Mattress Co.,** which has been purchased by Harold L. Amster, who for nine years was manager of the Sealy Mattress Co., of Kansas City. Mr. Amster expects to increase the equipment at the plant and the number of employes.

***National Rhea Co.,** Putnam, Conn. Lewis A. Waterman, receiver for the company which is in financial difficulties, has asked the courts for authority to sell the property with no restrictions as to an acceptable price. An upset price of $147,500 had previously been made and it is believed this prevented a sale at the auction held last month. A reorganization of the company is expected to follow the sale.

MacDay Reworked Wool Co., Millbury, Mass., has sold its property on Riverlin St., to Buck Bros. Edge Tool Works, whose plant adjoins. The plant, which was burned last year, was formerly the **Molt Dye Works.**

New Machinery and Processes



Color Analyzer Adapted for Textiles

Automatic Color Analyzer

AN AUTOMATIC apparatus with which the colors of transparent and opaque objects can be analyzed with a scientific accuracy in less than ten seconds has been developed in the graduate laboratories of the University of Pennsylvania's department of physics. The device was perfected by Joseph Razek and Peter J. Mulder, instructors in the department of physics.

The machine is expected to find wide application in the dye and textile industries both for the control and uniform reproduction of colors and for maintaining accurate color standards. With a permanent graphical record, such as that made in this color analyzer, it is said to be possible to match a color perfectly without ever seeing the actual color. It has been found possible, by use of the apparatus, to differentiate between two colored samples known to be of different compositions but which appear exactly alike to the eye. Recently the machine also was found to be suitable for the study of the fading of colors in materials by showing definitely which portions of the spectrum were most readily affected. By a slight modification of the illuminating unit, the machine can be used to measure the gloss of a surface.

The new color analyzer is portable and is built into a box about the size of a large suitcase. It can be operated either by connection to any electric light socket or from a suitable bank of batteries.

The sample to be tested is placed over a small rectangular opening on the top of the box where it is illuminated by a powerful source of light. The light reflected perpendicularly from the sample is admitted to a spectroscope in which it is separated into its component colors. A selected portion of the dispersed light is then allowed to pass into a photo-electric cell, the very feeble current passed by this cell as a result of the light falling upon it being amplified about a million times. This is done by means of a special amplifier, known as a "bridge grid resistor amplifier" developed for the particular purpose.

The amplifier employs two vacuum tubes such as are used in the last stage of many radio sets, with certain adaptations which greatly increase their sensitivity. The amplifier current is indicated on a sensitive galvanometer whose reading can be noted on a scale on the front of the machine and at the same time recorded on a photographic film. By turning a small crank, different portions of the spectrum are successively admitted to the photo-electric cell until the entire spectrum has been covered, while the photographic film is moved through a corresponding distance. Co-ordinate lines and an identification number are printed on the film in a separate compartment of the machine. The entire operation of analyzing a color is thus automatic, and a complete record of a colored sample can be obtained in less than ten seconds.

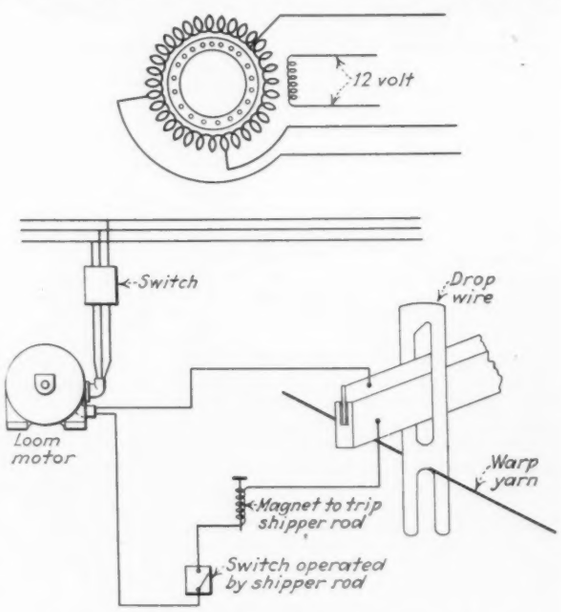
Electricity for Warp Stop Motion Taken from Loom Motor

By W. A. Mayor

General Electric Co., West Lynn, Mass.

MANY mills are now using alternating-current supply for the warp stop motion on silk, wool, and cotton looms. The energy required is 12 volts and is generally supplied by a small transformer, 25- or 50-watt capacity, installed at each loom. Occasionally one large-capacity transformer is used to supply a group of looms. Such an arrangement requires additional wiring from the central point to each loom.

The General Electric Co. is furnishing loom motors designed to include a separate winding assembled in the same slots with the motor winding but insulated from it, to supply the 12-volt circuit for the electric stop motion. The motor is furnished with a terminal board having a conduit fitting and leads 4 ft. long for connection to the motor switch, and an additional fitting with two terminal leads for connection to the electric warp



Showing How Current for Warp Stop Motion Is Taken from Motor

stop equipment. The accompanying sketch shows the relation of motor winding and separate coil winding to supply the 12-volt circuit. There is also a diagram of connections showing the arrangement of the Rhode Island Warp Stop Equipment motion and the special design of loom motor, including the 12-volt circuit.

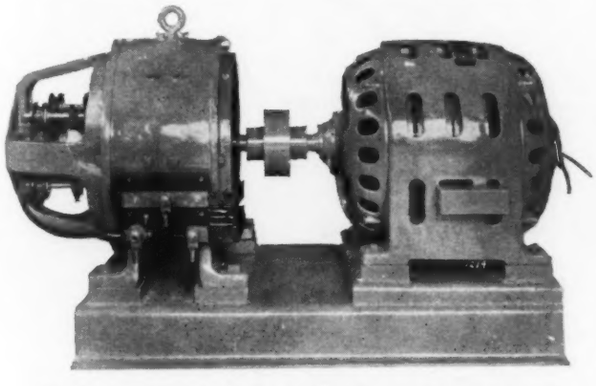
The added winding does not affect the running characteristics of the motor because, for normal operation of the loom, the warp-stop-motion circuit is open and no current is being drawn. The coil is called upon to supply the current only when a warp yarn breaks, at which time the drop wire falls on the electrodes closing the circuit to a magnet, which causes the shipper rod to be tripped and stop the loom. There is also a switch in circuit with the magnet which will open this circuit when the shipper rod has been tripped.

The advantages of the above arrangement are as follows: (1) simplified wiring for the electric stop motion on the loom, (2) liberal capacity for the current demand, (3) elimination of extra transformer at the loom or of the group-wiring arrangement, and (4) removal of the voltage to the stop motion when the motor is stopped. A number of installations have been made and are working satisfactorily.

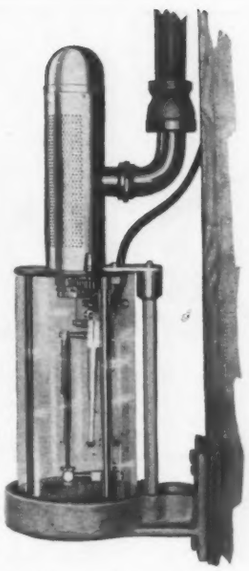
Master Control for Humidifying Equipment

THE Bahnson Master Control, a device to control humidifying equipment so as to maintain a constant relative humidity, has been placed on the market recently by The Bahnson Co., Winston-Salem, N. C. The Bahnson Co. has for several years manufactured individual units for producing and maintaining constant relative humidity, and has now developed this apparatus for group control. While the master control was designed primarily for use with Bahnson humidifiers, it is stated that it operates equally well when used in connection with humidifying equipment of other makes. It is believed that the control will be of value throughout the textile and other industries where a constant relative humidity is of importance to the proper manufacturing or processing of the materials in use.

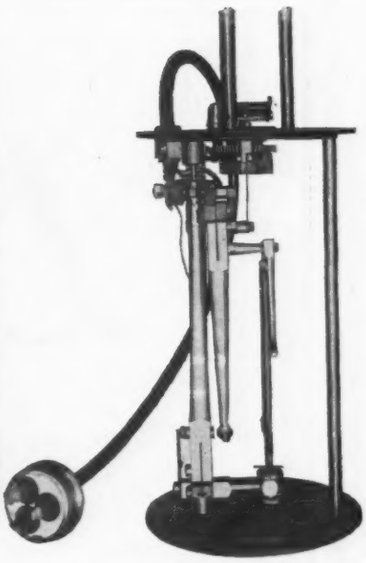
In rooms where the building vibration is negligible, the control is said to operate with a variation in relative humidity of about ½% above or below the point desired. Where the building vibration is great, the variation ranges from 1% to 1½%. A simple attachment allows the control to be set at any desired relative humidity. When installing the control it should be located near the center of the group of humidifiers it is to operate.



Electrically Welded Base for Motor-Generator Sets



Master Control for Humidifiers



Control Mechanism for Maintaining Constant Relative Humidity

An essential feature of the control is the actuating element which lengthens when the relative humidity rises and shortens when the relative humidity falls. The mechanism of the control is designed to multiply the movement of the actuating element to such an extent that this movement may be utilized to control the valve which supplies water to the humidifying system. The water supply is governed by a motor-operated valve. In operation the control acts as a switch, closing the circuit to the water valve, thereby causing the valve to open or close as necessary. The manufacturer states that the actuating element fulfills the requirements for uniformity, sensitiveness, strength, and permanence, and also that its reaction to changes in relative humidity is practically instantaneous.

The current consumed by the motor-operated valve is approximately 0.6 amperes at 110 volts, and is required only during the opening or closing of the valve, each operation requiring approximately ten seconds. The electrical circuit is made by a quick action, and as the circuit is broken in the valve, the possibility of arcing and consequent pitting of the contact points is reduced to a minimum. All working parts are enclosed.

Welded Base for Motor-Generator Sets

THE Reliance Electric & Engineering Co., Ivanhoe Road, Cleveland, Ohio, have adopted bases constructed from heavy steel plate, electrically welded, for motor-generator sets which they manufacture in sizes up to 250 kw. The tops and ends of the welded base are completely closed so that no dirt can collect underneath.

The pads upon which the motor and the generator rest are lined up horizontally and vertically by using the machines themselves as patterns for doing the aligning. Such shims as are needed are placed between the pads and the base. The pads with the shims beneath are then welded to the base. Horizontal alignment is maintained by the use of tight-fitting dowels. These are driven into the pads, through two diagonally opposite feet of each unit. Units may be removed from the base without disturbing the alignment when they are to be replaced.

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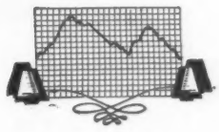

Too Soon For General Business Recovery

Textiles May Turn for Better by Next August Leading General Recovery, Says Dr. Haney

SUMMARY

While no one can feel absolutely certain, it seems probable that the recent recovery in certain basic industries does not mark a major upturn in the business cycle. A further period of renewed correction is to be expected. The textile industries in general are dragging bottom and a broad improvement of fairly sustained character should develop in the last quarter.

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The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE outstanding fact in the business news is the January snap-back in the activity of certain basic industries. The gain for the month was more than seasonal in several important cases and this has aroused hopes of sustained recovery. But there is a question, and that is, will this January spurt carry through?

The Bullish Arguments—The arguments of those who believe that the spurt will carry through, run as follows.

1. The increase in steel production was pronounced and was backed by some good buying. Steel production rose to 93% of normal against 83% in December. This recovery is based on large orders for rails and railway equipment, sustained good buying of structural steel and agricultural implements, and a considerable improvement in the quantity of materials taken by some of the automobile manufacturers. The unfilled orders of the U. S. Steel Corp. made the usual seasonal gain.

2. Automobile production showed a large increase in January, preliminary estimates placing it at nearly 300,000 cars and trucks against 125,000 in December, and 424,000 a year ago.

3. There was a considerable increase in the value of construction contracts awarded and a large expansion in "contemplated new construction," as reported by the F. W. Dodge Corp.

4. A general reduction in the re-discount rates of the Federal Reserve banks and moderately easy money, while gold exports seem to have definitely ceased.

5. Improvement in sentiment, aided by a further recovery in the stock market and rallies in wheat and cotton.

Arguments Against Sustained Upturn—The arguments of those who doubt that the January recovery represents the beginning of a sustained upward trend are in brief as follows:

1. A sharp decline in New York state factory employment carried it to the lowest level for January that has ever been reported; U. S. employment declined.

2. January department store sales fell 2% behind a year ago which means a more than seasonal decline, and only about 88% of normal as compared with 94% in December. Mail order sales were also lower.

3. Foreign trade volume in January was low.

4. A continued sagging trend of commodity prices has carried them to the lowest level since 1922.

5. The P-V Line (ratio of commodity prices to the physical volume of trade) continues to move sidewise at a low level, below normal.

6. Building contracts awarded, measured in floor space, continued their decline in January and were very low.

7. The broader indexes of general business activity showed little or no recovery and continue at low levels, including bank clearings, railway car loadings, employment and imports.

8. Collateral loans and brokers' loans have increased, while the member banks' investments declined and the loan-deposit ratio is very high.

9. Business failures are increasingly numerous with liabilities large; numerous scattered bank failures.

Not Yet Out of the Woods—One can hardly escape the conclusion that while some real recovery has occurred in business, we are not yet out of the woods. Expansion of steel production has the appearance of a rally based largely on a rebound from panicky excesses and over-cautious buying in November and December. It is difficult to find a basis in fundamental conditions as affecting the chief steel consuming industries.

The automobile production spurt is largely confined to Ford and Chevrolet, and the used car problem still weighs upon the industry. It remains to be seen how significant is the announcement of large construction plans that are said to be contemplated (though these may become an important factor). As to the re-discount rate, it will be effective in stimulating speculation and investment, but does it make credit any easier or more abundant for the ordinary business man? Is it likely to help the mortgage loan market?

On the other hand, such proven facts as the general decline in employment in New York State, and the drop in retail trade, in spite of strenuous special reduction "sales," can not be discounted. The decline in commodity prices proves the existence of much over-production and goes ill with the

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Durene as manufactured by the American Yarn and Processing Co. is spun from carefully selected long staple cotton. Special processing increases its durability, elasticity, absorbency and its affinity for dyes. Investigate *Durene*, the *durable* yarn with the subdued *sheen*.

Write for quotation and samples on all counts.

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sudden January expansion of output.

Certainly the current play to get the public back into the stock market—and for two weeks now brokers' loans have been increasing considerably—must be witnessed by the commercial banks with great misgivings, for they know that their total loans are abnormally large in comparison with deposits and that these loans are too largely based upon collateral. Unfortunately, however, some of our most influential banks appear to have become "investment houses" rather than commercial banks.

Further Correction May Be Required—I can not get away from the conclusion that we are not yet in a position to expect a major upturn in business. The probabilities appear to favor the conclusion that the present situation is more like that found in early 1924 than it is like early 1928, and that, after a further rally in business that will run through March, some further correction will be required before there is finally established the basis for that sound sustained recovery which we all want and know will ultimately come.

Textile Production Curtailed—The conclusions to be drawn from our general textile barometer are not inconsistent with the foregoing. The value of textiles produced in December, as estimated by the Bureau, is the lowest since 1921. Our composite index of textile machinery activity in December was the lowest since August, 1924, thus the textile industries show more depression in activity than a good many others.

As I have pointed out, the textile industries tend to move in two-year cycles. It seems that on this hypothesis the bottom of the recession can not be far off. Our value of textile products curve is so low and the period of downward readjustment has gone on so long that the end of the decline seems probable.

Recovery in Textiles May Start in August—We do not expect an immediate sustained advance in textile industries, however, for both reason and precedent indicate that the readjustment is likely to be completed during a period of relative dullness and irregularity. August would seem to be a reasonable point of time toward which to look for the beginning of a sustained cyclical recovery. In the past such recovery has usually been anticipated shortly by a more than seasonal gain in wholesale dry-goods sales, which indication has not yet been given.

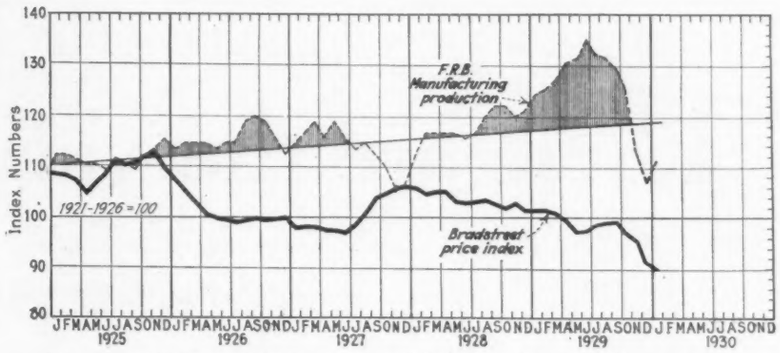
Index Numbers
140
130
120
110
100
90
80
F.R.B. Manufacturing production
1921-1926=100
Bradstreet price index
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 1—PRODUCTION AND PRICES—Industrial Production—Average Daily, Adjusted for Seasonal Variation, Federal Reserve Board; Commodity Price Index—End of Month, Bradstreet's Journal. Average 1921-1926 = 100 for both indexes.

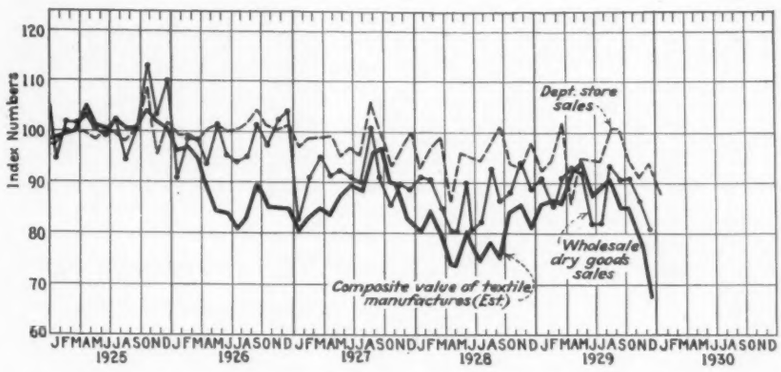
Index Numbers
120
110
100
90
80
70
60
Dept. store sales
Wholesale dry goods sales
Composite value of textile manufactures (Est.)
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 2. GENERAL TEXTILE BAROMETER—Wholesale Dry Goods Sales—Adjusted for seasonal variation; 1922-1926 Average = 100; (Federal Reserve Board) Dep't Store Sales—Adjusted for seasonal variation and trend; (Federal Reserve Board) Composite Value of Textile Manufactures (Estimated)—Weighted Composite of Cotton, Wool, and Silk Machinery Activity adjusted for Seasonal Variation and price levels (N. Y. University, Bureau of Business Research).

The Textile Trend

COTTON Textile Markets—A rising cotton market was followed by an increased activity in print cloths last week. Cotton eased at the outset of the current week, and there was an immediate bear pressure from buyers. Prices had improved one-quarter cent during the activity, but lost one-eighth cent in the next few days. Other types of gray goods were relatively unaffected by the print-cloth buying. Sheeting sentiment improved but orders and prices showed no gains.

Wool Textile Markets—Signs of strength in raw wool and apparent firmness of spring goods prices lead to the belief that men's wear fancies for fall will show only minor reductions. No important increase in fabric sales is noticeable although the market has improved considerably since a month ago. There is spotty business of fair volume in popular-priced worsteds. French system worsted yarn spinners reduce quotations; price-cutting in men's wear mixtures.

Knit Goods Markets—Hosiery unsatisfactory; price-cutting and bargaining weaken women's full-fashioned; half-hose unchanged. Producers deprecate reports of cut in heavyweight underwear prices. Outerwear steady; all bathing-suit lines active.

Silk Textile Markets—Raw silk soft, prices down 5c. Buying slow and no early improvement is looked for. Thrown silk also quiet, and prices drop 5c. Spun silk yarns in active demand; some sizes short. Settlement of dress trade strike strengthens broadsilk demand and brings firmer tone in market.

ACELE BULLETIN NO. 3

These are the various put-ups of

SKEINS . . . Grant reeled, seven section, put up in ten-pound bundles, twenty-two bundles to the case, net yarn 220 lbs.

SPOOLS . . . Four-inch traverse, three-inch flange, each containing approximately four-tenths of a pound when loaded. Packed six spools to a tube, sixty-three tubes to a case, approximately 170 lbs. net yarn.

CONES . . . Natural and tinted cones contain a little more than one pound of yarn. Case shipments vary but average about one hundred and ninety pounds net yarn.

* * *

Give us the opportunity to prove to you that this is a better acetate yarn, made to do a better job. Write, phone, wire or call.

ACELE Division, Du Pont Rayon Co.
2 Park Avenue, New York City
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BULLETINS OF OUR PROGRESS WILL BE PUBLISHED HERE REGULARLY

Better Financial Statements

Pacific Mills Show. Net Profit of $1,031,168 in 1929

MILL statements are coming to hand more rapidly and strange as it may seem in view of much talk concerning depressed conditions in the textile industry, most of them show increased earnings and 1928 losses converted into 1929 profits.

The Pacific Mills is another encouraging example of what is happening under effective management in New England, and following closely the Amoskeag surprise, is giving further impetus to the desire and expectation of successful readjustment of New England mills to modern conditions. In accounting for the good showing of the Pacific, Treasurer Colby states that "Improved control of inventories, expense budgets, quota sales and operating economies for the year were helpful in contributing to the profit shown. New business developed in certain departments was encouraging. It is the policy of the company to dispose of such real estate and sundry assets as are not needed for manufacturing purposes and during the year $205,968 was received from this source. This sum was deducted from plant and sundry assets and not included in profit and loss results for the year."

Shares of Amoskeag and Pacific continued quiet during the week, but American Woolen preferred had another sharp spurt upward, touching a new high point for the year of 45.

Pacific Mills Earn $2.57 on Common—A net profit of $1,031,168 after all charges, including depreciation and taxes, is reported by the Pacific Mills for the year ended Dec. 31, 1929. This is equal to $2.57 a share on the 400,000 shares of capital stock, and compares with a net loss of $600,751 in 1928, and a net profit of $1,292,518 or $3.23 a share in 1927. In the past year the company deducted $600,511 as inventory markdown, as compared with $465,808 in 1928 and $547,519 in 1927. Net sales in 1929 were the largest for any year since 1925, amounting to $47,603,674. In 1928 net sales amounted to $44,120,650 and in 1927 were $44,088,359. The balance sheet reveals the steady progress that Pacific is making; especially notable is the reduction of over $6,000,000 in the 5½% notes of 1931, bringing the total down to $7,442,000 out of an original issue of $17,500,000.

Beacon Mfg. Shows Larger Earnings—Beacon Mfg. Co., New Bedford, Mass., reports net profits of $399,478 for the fiscal year ended December 31, 1929. In 1928 the earnings were $353,159. Although it produced a greater volume of goods in 1929 than ever before in the history of the corporation, Beacon will probably surpass that production total for the current year, Charles D. Owen, treasurer, told the stockholders. "Expansion of the corporation's southern plant is about complete," he said, "and the directors do not expect to move any more machinery there from New Bedford." The plant account shows an increase of $188,109 and $147,840 was paid out in dividends at the rate of 6% on the common and preferred stocks. Quick assets total $2,883,746 exceeding quick liabilities by $2,490,596. The corporation has large assets in relation to its capitalization and has never failed to earn its preferred dividend several times over, nor has it ever failed to pay its common dividends.

Powdrell & Alexander Profits Increase—Powdrell & Alexander, Inc., Killingly, Conn., net profit of $483,883 after taxes, etc., for 1929 calendar year is equal, after $57,298 for preferred dividends, to $8.20 per share on 52,017 common shares, the average number outstanding during the year, as compared with $3.91 per share on 50,000 common shares in 1929. Gross sales in 1929 totaled $6,822,257 as compared with $5,885,378 in 1928. The balance sheet as of December 31, 1929, showed current assets of $2,745,704 and current liabilities of $1,093,346.

Boott Mills Have Good Year—Balance sheet of Boott Mills, Lowell, Mass., for the year ended December 28, 1929, indicates a profit of $155,764, equal to $12.54 a share as compared with earnings in the previous year of $179,241, equivalent to $14.26 per share. No depreciation was charged in either year. Surplus account at the end of the period showed an increase of $5,764 while dividends paid totaled $150,000. Net quick assets on December 31, 1929, amounted to $2,530,813 as compared with $2,505,071 a year ago. The company is capitalized at $1,250,000.

Reorganized Gosnold Snapback—At the first annual meeting of stockholders of the Gosnold Mfg. Corp., New Bedford, Mass., the financial statement for the six months ended Dec. 31, 1929, showed earnings of $157,436 after interest, taxes, and depreciation. After payment of preferred dividends, earnings were equal to $13.40 per share on the 9,900 shares of no par value common stock. Henry H. Crapo, president of the company, said that the volume of business was very good, earnings were satisfactory, and that under present conditions the plant will continue to show a margin of profit.

Soule Mills Has Better Year—A manufacturing gain of $140,610 is shown in the financial statement of the Soule Mills, New Bedford, Mass., for the year ended December 31, 1929. This gain, after depreciation, compares with a loss of $34,107 a year ago. The manufacturing account shows $2,601,458 in total receipts for the year, against $2,460,846 in total expense, leaving a gain of $140,610. A total of $17,508 was added to the plant account and $41,177 to inventory. The sum of $54,180 was allowed for depreciation, the profit and loss account showing a gain of $37,484. The corporation paid out $100,000 in dividends, representing $2 quarterly. This year it has been reduced to $1.50 quarterly.

American Mfg. Earns $8 on Common—The American Mfg. Co., Brooklyn, N. Y., for the year ended Dec. 31, 1929, reports net earnings, after depreciation and all other charges of $911,960, equal, after payment of preferred dividends, to $8 a share on the common stock. This compares with earnings after charges, in the previous year of $512,102, equivalent, after preferred dividends, to $2.55 on the common. Sales for the period increased from $12,882,340 to $12,924,612. The balance sheet shows working capital of $6,603,359 as against a total of $5,939,883 a year ago.

Whitman Management Hopeful—A loss of approximately $82,000 before depreciation was shown by the Whitman Mill for the past fiscal year. No dividends have been paid by the corporation since the second quarter of 1926. George W. Pope, treasurer, said that the Whitman ran practically all of its spindles and looms full until the latter part of the year, and sold no goods below cost. "There are a number of indications of improvement," he said, "and there is a better spirit all through the organization. The operatives feel things are going better; our percentage of seconds is down and we are well up on our deliveries."

Liquidation of Lancaster Mills Likely.—Stockholders of the Lancaster Mills, Clinton, Mass., manufacturers of ginghams and dress goods, at their annual meeting February 21, will consider the matter of raising new capital or liquidating the company. According to Robert R. West, treasurer, there was a loss last year of approximately $404,000 after all charges, including depreciation, as compared with an operating loss of $161,000 during the last half of 1928. Business obtainable in large volume last year was at such prices that profitable operation was impossible, and that obtainable at profitable prices was of negligible volume. While the outlook for any substantial return from liquidation, even to preferred stockholders is not promising, directors do not feel, in view of market conditions, that they can recommend to any stockholders the con-

CREPES have the volume today

How much of this business are you getting?

THE "hand" of a crepe is vital in the present fashions. Mills that fail to study the changed fabric needs will meet with serious sales resistance.

To produce a cloth correct in the four cutting requirements listed below, use du Pont Super Extra yarn. Du Pont, pioneer in the production of many-filament rayons, has achieved a perfectly balanced yarn . . . Super Extra. It produces a fabric with a supple "hand," a better cover, a drape both ways, a deep glow that seems to grow from within.

Because it is clean, du Pont Super Extra yarn is more economical to run, too. A short test will prove it.

1. Tightly fitted sleeves require fabrics that won't pull out at the seams. (Because of its strength and softness, du Pont Super Extra Yarn will make a fabric firm, yet supple.)

2. For gently bloused bodices, wiry textures are impossible. (Du Pont Super Extra produces a fabric with a soft "hand.")

3. Only a fabric that drapes both ways can be cut on these circular lines. (The balance of du Pont Super Extra makes such a fabric possible.)

4. Wide-around skirts must be supple to fall smartly. (Du Pont Super Extra Yarn makes a cloth that falls in clinging lines.)

LOLUSTRA

keeps its low lustre after it is laundered

Knitters and weavers who can't afford to gamble with artificially de-lustred rayons buy Lolustra. That subdued glow it gives to fabrics is inherent in the yarn . . . not painted on.

DUPONT RAYON

REG. U.S. PAT. OFF.

Member Rayon Institute of America, Inc.

DU PONT RAYON COMPANY

2 Park Avenue New York City

tribution of additional capital to the company.

Common stock of Marshall Field & Co. was listed on the Chicago Stock Exchange and trading in the stock, a new issue, began Feb. 18. In addition to the wholesale and retail stores owned by the company in Chicago and suburbs, the Frederick N. Nelson store in Seattle, Wash., and a wholesale house in New York, the company owns 25 mills and numerous factories located in Pennsylvania and the southern States. The Carolina Cotton & Woolen Mills at Leaksville-Spray, N. C., and Fieldale, Va., are owned by Marshall Field & Co.

No Change in South—Southern textile shares remained practically unchanged in price during the present week, a number of issues were bid up slightly while a few either remained unchanged or declined fractionally thus bringing about only minor changes for the week. The average per share in bid price of 25 of the more active common stocks closed for the week ended Feb. 15 at 84.92 compared with 85.04 for the previous close, according to the weekly summary furnished by R. S. Dickson & Co., Charlotte, N. C. A number of issues have declined gradually to prices that now offer good yields with payment of regular dividends and in addition the basis price per spindle is far below replacement.

Boston Stock Auctions—The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
70	Associated Textile, com..	...	35½–36½	.....
25	Nashawena.....	100	21½	+ ½
15	Pepperell.....	100	103–102½	+ ½
14	Merrimack Mfg., pfd.*..	100	62½–¼	— 1¾
25	American Mfg., com....	100	61	+ 9
3	Ludlow.....	...	150½–½	— 1½
112	Arlington.....	100	24¾	+ 4¾
10	Gosnold, com.....	...	30	+24
5	Gosnold, pfd.....	100	55	+39½
4	Naumkeag.....	100	90	.....
30	Plymouth Cordage.....	100	94–94½	+ 1
10	Quissett.....	100	50½	— 4½
25	King Philip.....	100	105	+15
160	Merrimack Hat, com....	...	65¼	+ 7¼
508	Total			

*Extra dividend.

Textiles on N. Y. Exchanges—The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended Feb. 19:

	High	Low	Last Sale	Net Change
American Woolen....	20½	15¾	17¾	+1
American Woolen, pfd.	44¼	36½	40¼	+3½
Belding-Hemingway..	5¼	4¼	5	— ¼
*Blumenthal.....	43½	36	42¾	+7¾
Cannon Mills.....	32½	31½	31¾	— ¼
Collins & Aikman.....	35¼	31½	31½	—3
Consolidated Textile..	1¼	1¼	1¼	+ ¼
*Courtaulds, Ltd.....	12¼	12¼	12¼	— ¼
Duplan Silk.....	16½	15¾	16½	+ ¼
Durham Hosiery, pfd.	53	44½	53	+3
Gotham Hosiery.....	26¼	23½	25¼	+1¾
Kayser, Julius.....	39¾	38	38¼	+ ¼
Kendall, pfd.....	84	83	84	....
Mallinson.....	8½	8	8½	....
Mohawk Carpet.....	36	33	34¾	—1¼
Pacific Mills.....	30	27½	30	+2½
Phoenix Hosiery.....	13	13	13	....
Real Silk Hosiery....	59½	54	57½	+2½
*Tubize.....	143¾	135	135	—8
United Piece Dye Wks.	28¾	26½	28	+ ¼
Van Raalte.....	18½	18½	18½	....

*Listed on Curb.

More Resistance in Cotton Yarns

Spinners Are Holding Firmer Than the Cotton Market

PHILADELPHIA.

YARN prices have held more firmly than cotton during the last week, indicating that spinners have shaded quotations to a point beyond which they cannot go unless additional weakness develops in the raw-material market. There has been a slightly easier tendency in selling prices as compared with last week, but this has been unimportant, with the majority of counts holding unchanged and fairly steady.

Price-cutting is being followed by a smaller number of houses, but medium or large-sized orders have been booked only where the seller was willing to offer the manufacturer a real bargain. In such instances knitters and weavers have been willing to cover their needs several months ahead, underwear and plush manufacturers being examples of this.

Plush Yarns Improve—Improvement in the plush trade has been one of the outstanding developments among local manufacturers, but more among manufacturers of automobile fabrics than with those catering to the furniture or drapery plush business. The largest manufacturer here is operating more looms than he has for many months, and while his new yarn contracts are not up to the old standards, he is taking delivery on old contracts that have not been moved for months.

There have been several sales of 100,000 lb. each to the plush trade, and an insulator was in the market this week for 500,000 lb. The latter had not been placed, by the middle of this week, according to reports, but dealers assert that exceptionally low figures were quoted on this yarn, which did not have to be of best cotton. Where manufacturers are willing to use poorer staple and quality cotton it is possible for them to buy considerably under the price quoted where good stock is required.

This is a result of the lack of large supplies of good cotton as compared with abnormal quantities of poor staple and grade from the last crop. It is the reason that finer counts of yarns are quoted proportionately higher than coarser counts spun from the lower grade cottons, and why combed spinners and mercerizers have not reduced prices in proportion with the decline in the futures market.

Combed Prices Held Steady—Combed spinners call attention to the fact they are forced to pay premiums on long-staple cotton that bring their costs at present close to what they were before the raw material future market suffered its drastic decline. All manufacturers using good-grade yarn are affected by this to a greater or less degree, while manufacturers able to use yarns spun from "off" cotton are being quoted relatively lower prices because of large supplies of raw material.

Spinners have quoted 20s-2 warps this week from 31c. to 33c., and few were willing to sell at the lower figure; 30s-2 warps were quoted from 36½c. to 38c., depending on the grade, and several sales have been completed on the basis of 35½c., with specifications for immediate delivery from stock. The majority of sales have been of this nature, manufacturers having little confidence in present prices despite their lowness, and being content to cover their immediate needs. There is little bull talk of cotton, although most traders admit that the bottom is near at hand, if it has not already been touched.

Underwear manufacturers have been taking additional quantities of both carded and combed yarns for lightweights, although trading with them has not been at a level comparable with that booked by spinners when extra-carded 30s were selling at 38c. Underwear manufacturers have bought this week at 36½c. for 30s extra-carded and 38s combed at 49c. to 49½c. Several spinners of carded yarns state that they are well sold ahead for several months as a result of this buying wave.

Mercerized qualities are quiet, and specifications on old contracts are below normal for this time of the year. Full-fashioned hosiery manufacturers are taking smaller quantities on old orders. This condition has made demand for combed yarns from mercerizers small, and there are reports of gray yarns selling at lower prices.

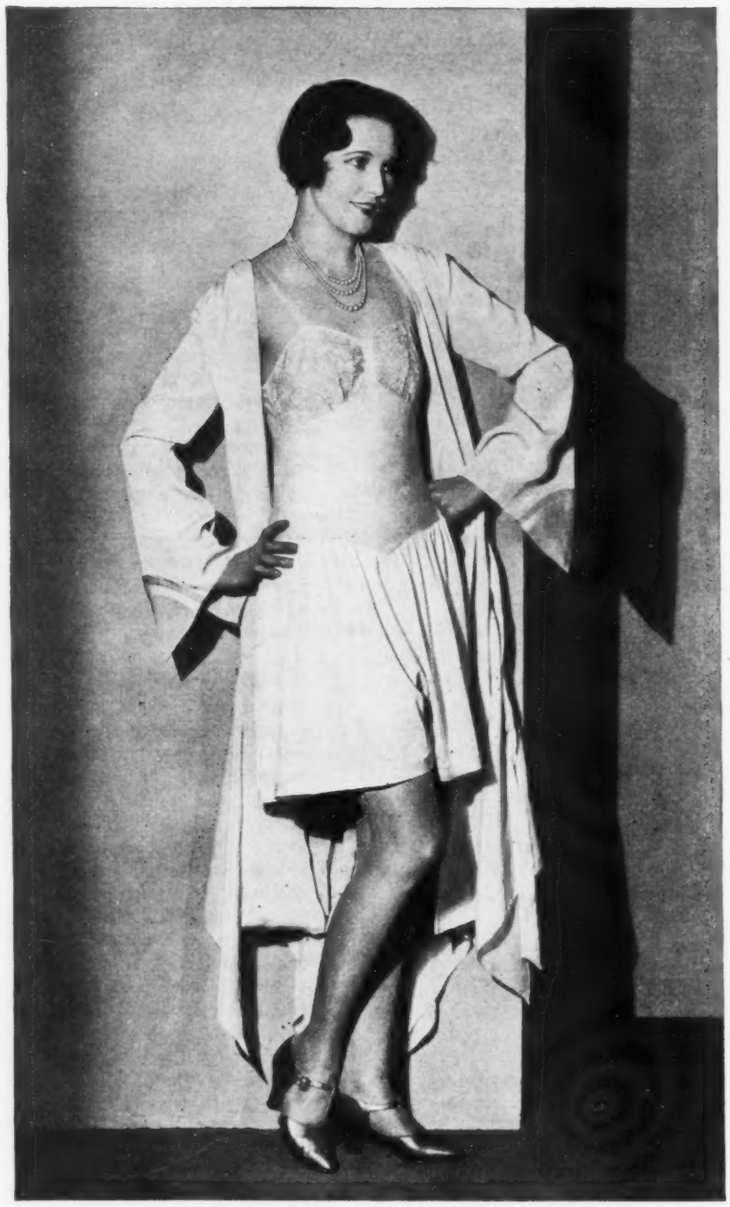
●

NEW YORK — There has been little change in the cotton yarn market during the last week, and it appears that the pace is about normal. Viewed as a whole it cannot be said that yarns are experiencing a period of depression, in fact some sellers indicate that they are running considerably ahead of last year for this month. There are naturally ups and downs for the different classes of yarns and for different sellers, but the average remains about the same. At present some purchasers have covered almost to the end of the year, but most of the volume is in small lots. The insulating trade has been taking more yarn in proportion to the other branches.

There is a feeling in some quarters that many of the insulating firms are carefully studying the market and giving consideration to the possibility of covering for a period of six months to a year. Insulators generally pursue the policy of purchasing only against their factory requisitions, but there are times when,

"MADE OF BEMBERG" IS A STAMP OF QUALITY IN FABRICS

Bemberg is creating new standards of value and profit in both woven and knitted fabrics



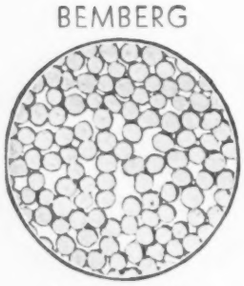
This charming negligee is made of rose and blue **Svelda crepe,** an all **Bemberg** fabric by **Aberfoyle,** from Vogue Pattern No. 9965.

The undergarment is the "Onesall" of **Silkenese,** woven of silk reinforced with **Bemberg** by **Vanity Fair** on glove silk machines. The "Onesall" combines bandeau, vest and panties in one garment, designed especially for the new silhouette. Silkenese underthings are now sold in over 3000 retail stores.

The stockings are the famous **full-fashioned hose of Bemberg** that are sold in the better retail stores all over the country.

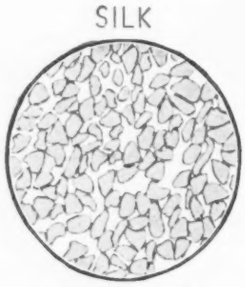
Bemberg has made it possible for you to offer to the hosiery, finer underwear, piece goods and ready-to-wear departments of your customers new and profitable quality merchandise beyond the range of mere price competition.

BEMBERG



Cross Section of Yarn
150 Denier—112 Filaments

SILK

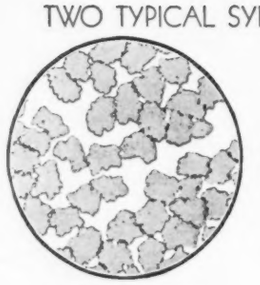


Cross Section of Yarn
150 Denier—112 Filaments

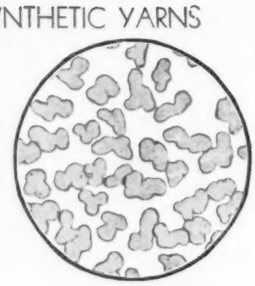
Bemberg
BRAND YARN

Fabrics made of Bemberg have natural subdued luster, drapability, softness, strength — the multi-multi-filament feature of Bemberg Yarn is one reason.

TWO TYPICAL SYNTHETIC YARNS



Cross Section of Yarn
150 Denier—32 Filaments



Cross Section of Yarn
150 Denier—30 Filaments

These cuts are from microphotographs of yarn magnified 300 times, as used by the Better Fabrics Testing Bureau, Inc.

AMERICAN BEMBERG CORPORATION, 180 Madison Ave., New York City

believing that the market price is lower than the average price will be over a period of months, they do not hesitate to purchase large quantities. Their ability to estimate their requirements quite accurately makes such a course fairly safe, but needless to say careful consideration is given to all factors before a decision is reached.

News that insulators have substituted some other insulating material for textiles in certain lines brings up the query as to what cotton yarn sellers and mills have been doing to preserve this important outlet for their yarns. Unfortunately, it must be admitted that, with a few exceptions, nothing has been done. The electrical industry is different from most outlets for yarn in that textiles here meet a strong inter-industry competition. To the insulators, textiles are only one of several possible insulating materials and there is constant substitution of one material for another.

The majority of yarn factors have merely gone ahead and sold the electrical industry such yarns as they have received inquiry for and bothered little about the where or why. It has been proved conclusively that cotton yarn can be made a much better insulating material. With a few notable exceptions, research along these lines has been done by the electrical industry and the electrical industry is not prejudiced in favor of textiles or any other insulating material. They merely wish for better insulation or decreased cost. It would appear, therefore, that the cotton yarn trade could best help themselves by doing a little research of their own and increasing the value of their product in competition with other insulating materials.

Obviously it is shortsighted to say that the electrical concerns purchase so cheaply that the mills cannot afford to give any thought or effort to a study of the problem. Electrical concerns have been fair in giving ample notice of the discontinuance of certain yarns and are always willing to cooperate, but yarn men have had little to offer and think that nothing can be done. It should be clearly understood that, quite outside of such matters as breaking strength and size, cotton yarns for insulating meet far different requirements than cotton yarns for weaving. It might well pay the cotton yarn trade to find out what elements are necessary for good insulation and then endeavor to make their yarn more in accord with these requirements and thus reduce the competition from other insulating materials.

●

CHARLOTTE, N. C.—More carded yarns were sold in the Charlotte-Gastonia area during the first half of February than during any equal period in several months, according to reports from representative dealers. Prices on carded qualities have been unusually low, although important spinners have attempted to maintain their margins in the face of low raw cotton quotations.

Inquiries on carded qualities have continued to come in during the week, but the combed yarn situation is very quiet. There have been no substantial changes in the prices quoted by Gastonia County spinners.

Dealers reported that carded yarns were sold at 31 to 32c. for 20s-2 and at 36 to 37c. for 30s-2. Hosiery yarns on cones were sold on basis ranging from 25 to 28c. for 10s single.

●

CHATTANOOGA, TENN.—The local cotton yarn market continued inactive during the week ending on Feb. 15. There were no changes in quotations and no new business of importance was booked during the week. The dullness extended to thrown silk as well as to the various grades of cotton yarns. Thrown silk, double extra, is being offered here at $5.35 a pound.

In carded cones, local brokers are quoting 10s at 28½ to 29c. and 20s at 30½ to 31½c.

Two-ply mercerized is being quoted at 82c. for 60s-2; 58c. for 20s-2 and $1.09 for 80s-2. Quotations on combed singles range from about 41c. on 18s to 79c. on 70s.

●

BOSTON.—The cotton yarn market is firmer, even though cotton has shown but little tendency to stabilize. Some dealers in looking for business had assumed a little too freely that spinners were willing to make further concessions, apparently not aware of the fact that the purchasing of desirable cotton on lower quoted levels has not been so easy as might have been expected. Some spinners have had difficulty in securing supplies of suitable cotton for future delivery, because holders were not willing to meet the low market. The larger houses, in some cases, have been increasing their premiums as futures decline.

Some fair yarn business has, however, been placed during the week, though, in general, buyers not in need of immediate deliveries have held off purchasing, pressing for further concessions. The market, however, is firmer. Lowering of asking prices by dealers anxious for orders has encountered spinner resistance. Some mills with good yarn orders on their books seem impervious to demands for lower prices. The weakness in cotton is not considered a permanent phase of the situation, and to take business on current low yarn basis is considered hazardous, in view of possible developments.

The main points to notice in current market are that yarn prices on most counts and qualities are cheap, that yarns have declined to a relatively greater extent than cotton, and that purchases at this time in moderate quantities seem a good proposition. There has been more purchasing of 5 to 10 thousand pound lots during the week. The irregularity of the market will probably continue for some time, but the worst seems to be over. Combed yarns are expected to lead the way to a better selling position, with carded yarns tagging on behind.

French Worsted Yarns Lower

Men's Wear Mixtures Have Been Reduced Five Cents

PHILADELPHIA.

THERE has been an important reduction in French-spun weaving and knitting counts, averaging three cents. English-spun counts have not been changed, although there are rumors that price-cutting in these qualities will make it imperative for spinners to meet lower figures if they are to book business. French-spun counts had previously been holding firmer than English, and this week's reduction brings them more in line with English-spun counts.

There is still a difference in favor of the French spinner, however, but this is usual. For example, weavers are being quoted $1.62½ for 2-40s, 64s, in English-spun qualities, while knitters are quoted $1.75 for 2-40s, 64s, zephyr yarn spun on French system. This is a differential of 12½c. in favor of the French, which is regarded by several knitters as being unduly large. While there are reports that this $1.75 figure for French-spun yarn has been cut, no manufacturer reports having bought for less than $1.72½, and few have been found this week who made their purchase at this low figure, showing the greater degree of firmness in the French section of the market.

Mixtures Continue to Decline—The reduction of 5c. a pound in French-spun mixtures used by the men's wear trade is the outstanding development for many weeks, and shows that a real battle is being waged by the half-dozen French spinners for this important business. The men's wear trade is on the eve of a new season, and such spinners are evidently determined that, rather than lower their prices after the season in goods is under way, they will do all of their cutting at the present time. Men's wear manufacturers are optimistic over the outlook, in view of lower yarn levels, looking for a good heavy-weight season.

Although one of the largest spinners of French-spun mixtures claims that he is quoting 5c. higher, manufacturers assert that they are able to buy mixtures 5c. lower, or on a basis of $1.80 for

Imported ENKA needs no introduction to discriminating buyers of synthetic yarn

The art of creating synthetic yarn for translation into fine fabrics is developed to a high degree in the production of Dutch Enka. This uniform excellence is multiplied in usefulness to weavers and knitters by the types of Dutch Enka which are now available:

AMPLUM (bobbin spun)
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A wider variety of fabrics may now be endowed with the quality that is the outstanding feature of Dutch Enka.

These synthetic yarns may be had in a wide range of denier and varying filaments . . . .

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Cannon Mills, Inc., Kannapolis, N. C.

2-30s, 64s, leaving out of consideration the few smaller factors who are offering men's wear mixtures at slightly lower figures. In connection with the latter, it is reported that none of the most representative spinners in this group is quoting such figures.

The situation in men's wear mixtures has been most inviting for spinners, the last year seeing the market expand by the introduction by a number of manufacturers of automatic looms, which further increased their consumption. Spinners are paying more attention to the men's wear mixture business than previously, and those who were the first in this field are finding competition much keener from the standpoint of number of competitors and prices at which they must book orders.

Large Inquiries Result—Recent cut is evidence of this trend which has been noted during the last year or more. Manufacturers have been attracted by yarn reductions, and during the past week there have been a number of the largest inquiries noted for many months. One was for almost half a million pounds, and there were several others of only slightly smaller dimensions. Yet there are many men's wear manufacturers who did not accept delivery on all of their light-weight yarn contracts, and these firms are not going to place additional business until these contracts have been completed.

Notwithstanding these facts, it is probable that a large volume of new men's wear yarn contracts for the coming season will be placed in the next week, since spinners want to get this business on their books, even though their margin at quoted prices will be small, and manufacturers plan to take advantage of prices which they feel will be the lowest for the entire year. The quotation of $1.80 for French-system mixes is lower than they have been able to buy from largest spinners for some time.

There has been no quotable change in outerwear counts spun on the English system, although there are reports that manufacturers are not paying the $1.22½ level asked by spinners for 2-20s, 50s. Several have admitted selling on $1.20 basis, but they assert that the quality was slightly inferior to 50s grade. Manufacturers state that the market should really be $1.20 for 2-20s, as few are paying more at present. There is a good call for French zephyr yarns to be used in making fabrics for three-piece suits for spring, 2-40s, 64s selling at $1.75 and 2-50s, 66s, at $1.92.

◆Thrown Yarn Quiet, Prices Drop 5c.

THE week's improvement in the broadsilk situation was too light to have any real effect on the movement of thrown yarns. Throwsters found it difficult to get business. Small emergency orders were being placed by some weavers, but this was not sufficient to hold the market steady, and thrown yarns declined about 5c.

There was no real apprehension felt, despite the lull, the general belief among throwsters being that the big spring business is merely delayed. Mills slackened up on commitments during the strike and are now low on yarns, it is claimed, increased movement of fabrics in March may bring a spirited demand for both organzines and crepes.

At the hosiery end, business was at a standstill. Most of the large manufacturers are covered for several months, and no early spurt in buying is looked for. Thrown-silk mills were producing cautiously and there was a fair amount of stock available.

Rayon Outlook Improves

Manufacturers More Confident; Certain Sizes are Short

RAYON demand held steady and the market showed a firming tendency. There was no spirited buying manifest, but manufacturers indicated increased interest. Considerable spot business was placed, and a limited amount of futures, some firms covering into April. Producers of viscose process yarn were short of certain sizes, and two weeks leeway was being asked; 100 denier multi-filaments sold actively in January and output was increased to meet demand; the call has continued, however, and these numbers are still short.

The 150 denier, 36 filament, dull luster, also is short; this yarn has sold steadily to weavers, and shipments now are slightly behind. The new popularity of 150-36 marks an interesting turn in trade preference. This number was favored early last year, but later the weavers turned to 150-24; the latter proved unsatisfactory, and in January the demand swung back, quite sharply to the 36s. Another line in which shortage has developed is the 300 denier.

Current sales were adequate, but nothing to get excited about. The regular 150s all were moving at a normal pace. Orders are spot and nearby for the most part; manufacturers were more confident than last month, but they continued month-to-month buying.

Strike Effect Deprecated—The garment strike in New York appears to have had little effect on yarn turnover. Producers said the spring pick-up was somewhat slow, but they attributed this to general conditions rather than to the labor trouble. The swift end of the strike prevented any sharp curtailment in yarn purchases, it was stated.

Weavers and Knitters Need Yarn—Weavers and knitters were believed to be short of rayon yarn for spring production, and increased demand was looked for. Some firms entered the new year with unusually heavy yarn stocks due to the curtailment of production which followed the November market slump, but much of this yarn has been consumed.

Underwear and Broadsilk Mills Buying—Manufacturers of rayon underwear and rayon broadgoods placed good-sized business during the week. These firms were enjoying a steady movement of their stocks and were confident regarding the outlook.

Second Quality Yarn Stressed—Manufacturers were buying second quality yarn in large quantities, and producers insisted that first quality be bought in proportion. The large quantities of inferior rayon fabrics now on the market are believed to be the result of widespread buying of "seconds," and the larger producers this week were exercising pressure to avoid further disproportionate sale of inferior yarn. It was recognized that the increase in the output of poor quality rayon fabrics tended to lower the public opinion of the fiber.

◆Spun Silk Active; Shortage of 60/2s

SPUN silk yarns were in active demand all week, and broadsilk mills had difficulty in getting adequate quantities of 60/2s which are being used largely for the manufacture of broadcloth and shantungs. Some spinners asked 2 to 3 weeks for shipment of these numbers. The market was very firm. Much pressure was being exercised to get spot delivery and premiums were being paid. The orders were medium to good-sized; practically no future business was placed.

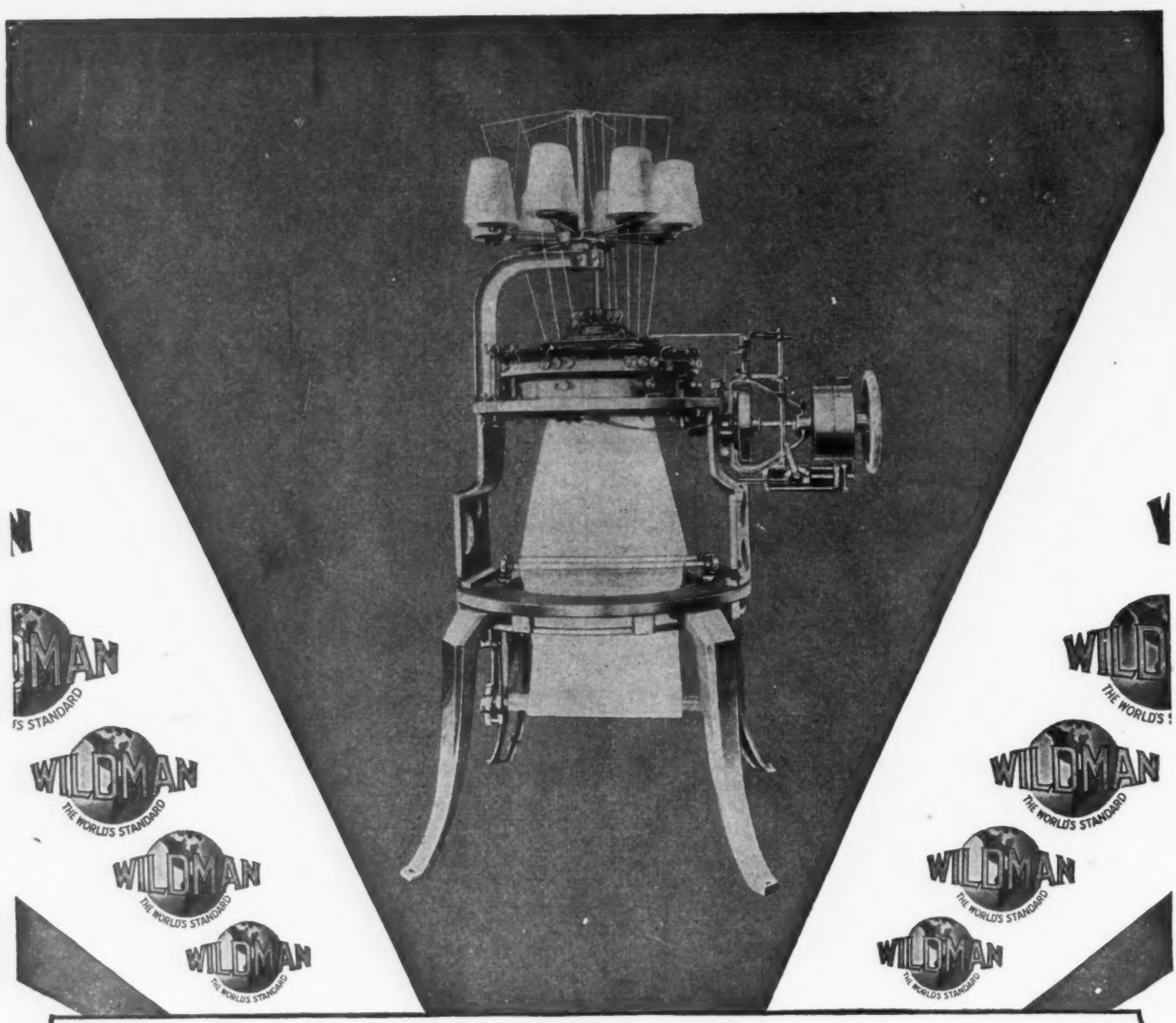
Woolen and worsted manufacturers were still holding off on their commitments, pending the outcome of the new fabric openings.

Spinners were kept busy writing orders, the call being divided between 60/2s and 62 singles. Demand showed an increase of over recent weeks and it was believed that buying would continue active for the next few weeks.

◆Comber Basis Rises as Cotton Declines

BOSTON

THE break in cotton well below 16c. has compelled sellers of waste to accept lower quotations on the flat-price stocks and lower flat prices on the best spinnable stocks. With cotton so uncertain, however, it is more than difficult to quote actual prices paid. The



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drop in cotton has depressed values, though not to the extent of forcing them out of what might be considered a normal relation to the cotton value. This is an important point to notice inasmuch as during a large part of last year the normal parity between cotton and its spinning wastes was disrupted. Some dealers are quoting peeler comber as high as 90% but are not making any sales on this advance in the basis.

The situation was not one to interest consumers of wastes unless they were really in need of material, and the gross turnover of last week was small. Dealers carrying no stocks of their own could on weak days purchase comber and strips to advantage, and were fortunate enough occasionally to sell their purchases on the stronger days. On the whole it was an unsettled and exasperating situation. The cotton-waste trade, however, has become pretty well hardened to unsatisfactory merchandising conditions, and will no doubt carry on as before, continuing to stay in business on the reasonable expectation that one of these days there will be a distinct change for the better.

In the Manchester cotton-waste market, costs for the next few months are new established. In most varieties they are lower than they were three or six months ago. Hesitation is still the dominant characteristic, except in the case of super qualities, which move at full prices. In other qualities keen competition has to be faced, and the several cotton wastes can meet this only by sharply cut prices. Yarns made from processed cop waste are in fair demand, and for some reason or another are more readily obtainable than yarns spun from other cotton wastes. The ratio of waste values in Manchester to American cotton futures rests upon a firmer foundation than was the case at several periods last year.

◆Merino Noil Stocks Show Large Increase

STOCKS of noils in the United States showed a gain of 25% for the year ended Dec. 31, 1929. Fine noils increased 1,693,000 lb.; ½ blood, 800,000 lb.; ⅜ blood, 41,000 lb.; ¼ blood, 79,000 lb. Stocks held by manufacturers showed a gain for the year of 1,482,000 lb., while stocks of dealers increased 1,047,000 lb. The percentage of noils held in relation to total wool stocks as of Dec. 31 was at the high point for several years, showing 3.3% of the total, as compared with an average during the preceding four years of 2.5%.

Increased firmness in wool is putting a little spirit into the market. The low prices made on noils however is a disturbing factor for topmakers, who find it all the more difficult to meet the mill demand for lower prices on wool tops.

While the price of an average fine domestic noil is 55c., a more defective quality can be bought well below this figure. On the other hand, as high as 60c. has been paid for a choice clean noil that probably would not require carbonizing. This, in the main, is the general situation in the noil market. The quality of the material offered determines the price, and consumers are very much more fussy over their purchases now than under normal conditions of manufacturing.

Bradford states that there has recently been more inquiry from the American trade, and that a number of the Bradford dealers are of the opinion that the time is almost ripe for the Boston market to operate more freely. The general position in the matter of price is unchanged. Bradford noil houses have lost a great deal of money during the past twelve months in their export business, particularly with Germany, due to the insolvency of a number of manufacturing merchants in that country.

◆Wool Waste Prices Now Normal to Wool

BOSTON.

THE wool waste market has moved into a more stable position. Prices have ceased to go down, and on some of the choice soft wastes slight advances have been made. A firmer position in the wool market has helped sentiment, but mill demand, which alone can rescue the market from its rather uncertain position, has not yet made its appearance.

Most wastes are now normally related to the wool price, and unless wools should have a further decline there is little reason to suppose that the waste market will move lower. There does not, however, seem to be much reason for a mill to buy large quantities of waste at this time, unless it actually needs the material, as the prospects are for a low-priced, though stable, market.

Interests in threads is still evident, and recent imports have been in crossbreds, which are relatively lower than fine threads for import. The output of crossbred threads in the United States last year was comparatively small, the big supply occuring in fine threads. Quotations in the European markets are generally nominal. All classes of wastes are declining to a level more in harmony with that of wool.

Bradford states that Boston has recently bought some 46s white threads at a price that would mean approximately 45c. landed duty paid.

◆Rayon Waste Quiet, Prices Soft

RAYON waste was quiet with prices uncertain. Dealers found it decidedly difficult to move stocks, and a considerable quantity of open bleached and unbleached has accumulated; however, not all of this is of standard quality. Converters showed a passing interest in thread waste, and bought hesitantly. Woolen and worsted manufacturers have dropped all commitments, pending the trade reception of the new lines.

Comparison of current demand with that of February, last year, showed a very unsatisfactory situation. The first three months of 1929 all were good, and February was quite spirited, manufacturers buying well ahead and a firm price tone being maintained. Whether this year March business will increase sufficiently to balance up for the lull in the first two months is doubtful.

Practically no future business was placed this week, and such spot business as was obtained was small orders. Prices were soft, but on the whole they held better than expected considering the slow market.

Lack Confidence in Cotton

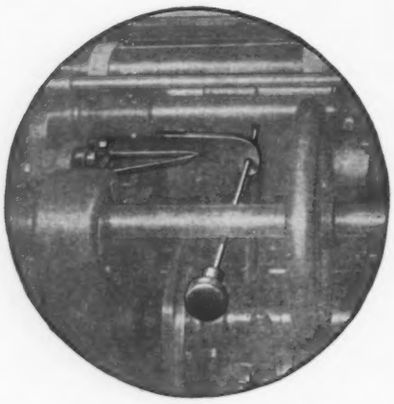
Doubt Development of Any Aggressive Support Until Acreage Is Settled

ACTION of the cotton market during this week has reflected the influence of conflicting factors or opinions. There is evidently a well defined feeling that no aggressive support, either from the cotton cooperative organization or from the trade at large, is likely to develop above the 16c. level, until it is too late for an advance in prices to affect the coming acreage. On the other hand, there seems nothing in particular to weigh heavily on the market at declines, having the development of spot liquidation, and the irregularity of the last week has probably reflected a disposition to even up commitments, pending fresh or more positive developments. After selling off to 15.26 under recent declines, May contracts rallied to 16.18 but the scattering short interest seemed to have been pretty well covered on this bulge, and prices later eased off again.

The report of the Census Bureau showing domestic consumption of 577,235 bales for January, compared with 668,286 for January last year, appeared to be about in line with expectations. At any rate it had no apparent effect on the market which seems to be proceeding on a general assumption that there is plenty of cotton to go around and that a moderate increase in the world's carryover is in prospect for the end of the season.

In this connection, however, it is pointed out that there will be no such

Seven Outstanding Advantages of the NEW READING DRIVE



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3 Eliminates the necessity for changing driving pinion and chain when it is desired to change the machine speed.

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5 It is highly efficient, the efficiency remaining practically constant over its entire speed range.

6 Makes it impossible for knitters to change the speed limit.

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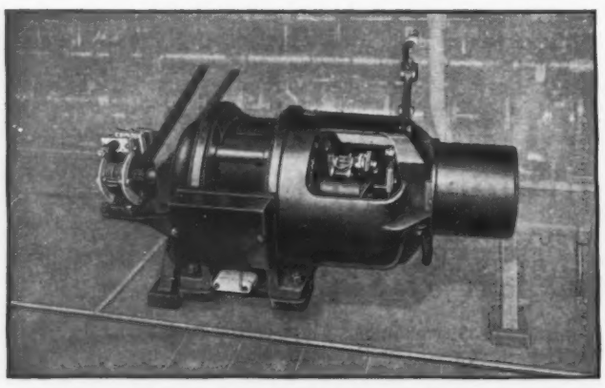
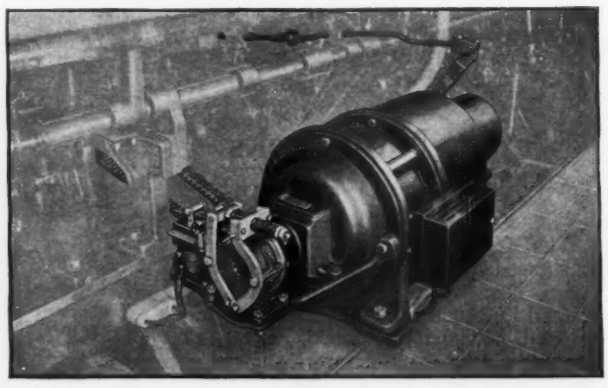


Showing the Brush Shifting Mechanism



Solenoid Brake End in the New Reading Drive

The "READING"
Full-Fashioned Knitting Machine

increase in the carry-over as would prevent an advance in prices should there be a substantial cut in acreage or should the coming crop get an unfavorable start. Indeed the course of end-season values depends much less importantly upon the size of the carry-over than upon the new crop outlook and the state of trade.

Sales of Fertilizer Start Briskly—The report of the National Fertilizer Association on sales of fertilizer tags showed an increase of 11.1% for January as compared with January, last year, and for the two months January and December, an increase of 5.8% as compared with last year. It is too early in the season for fertilizer sales to be considered an important indication of planters intentions. Last season purchases of fertilizer tags were slow at the beginning of the year and at one time looked as if they might fall about 25% behind those of the previous season. By the end of June, however, they amounted to 99% of the previous year's and it may be that the spring business in fertilizers this season will show a falling off as compared with the increasing purchases of a year ago.

Nevertheless, there is a certain trend toward optimism with reference to coming crop possibilities in some quarters. In the first place many doubt whether the campaign for reduced acreage will be altogether successful. In the second place, it is believed that the weather of this winter has put the soil in very good condition, and in the third place the cold winter is thought likely to have reduced the number of boll weevil in hibernation.

Cotton Traders Watch Wheat—Cotton traders are watching the wheat market very closely. The policies of the Federal Farm Board have developed somewhat further in grain than in cotton, and it is likely that some cotton men are watching the wheat market for indications as just how effective cooperative stabilizing measures are likely to prove. This is hardly a safe guide, but of course declining tendencies in other commodities have a certain sentimental effect on cotton, particularly as existing supplies are supposed to be fully adequate for the season's requirements.

Some improvement in spot demand was reported during the week, but it was hardly marked enough to have an important influence on the market. Liquidation of March contracts has made further progress in the local market, largely through exchanges of March for later deliveries at about recently prevailing differences. Next Tuesday will be the first March notice day here.

●

MEMPHIS, TENN., Feb. 17—The mind of the cotton merchant in this market is occupied with conjectures as to the outcome of two uncertainties: First, whether mill requirements will develop sufficiently to reduce buyer stocks to something like a normal level by the end of the season. And, next, as to the effect of co-operative association effort, especially with relation to their present position and the current crop.

Keen interest is felt with regard to Co-op intentions as to their March futures contracts, although, it is quite generally felt, the effect would be temporary whether or not deliveries are demanded. At the same time, it is recognized, spot cotton in the South cannot now be bought on a tenderable basis.

Grower Out of Picture—The grower, except as to low grades recently harvested, has about passed out of the picture until the new crop begins to move. There are some lots of desirable cotton in first hands, not offered for an unusual reason, to wit: The cotton, owing to unexpected declines, would not bring as much as has been borrowed on it; the lender is therefore forced to stand shoulder-to-shoulder with the grower, but this is making it difficult for some growers to arrange credits for the new crop.

Mills are exhibiting more interest in the medium and better grade staples, with shippers, in most instances, able to fill orders out of stock. Buying at first hands is largely confined to the low grades both because the buyer feels adequately stocked with the better grades and because of limited offerings.

The weather has been favorable recently and much cotton has been snapped or pulled; because of unsatisfactory prices and rather indifferent demand, it is coming on the market slowly. So far there has been no appreciable amount of distress selling for taxes, new crop needs or other purpose. The staple basis is unchanged from the previous week, at least nominally; not enough business is passing to test it. The soil continues too wet for plowing in this territory, but very good progress is being made in the southwest and in southeastern portions of the belt.

●

BOSTON.—Rather sharp recovery of the cotton futures market imparted confidence to sellers of extra staples, who were able to do a moderate business in some grades and lengths at better prices. Liquidation of long contracts and selling of futures to fix cotton prices combined to force March quotations close to 15c. and May to 15.25c. The decline was forced by a combination of unfavorable conditions, prominent among which was the failure of the Farm Board to do anything of a constructive character to sustain values. At the low point, raw cotton was about $20 per bale below the average for the previous season, and well under the cost of production. On the recovery, May rose to 16.17c., approximately 1c. a pound increase for the week.

The market is likely to fluctuate within a narrow range until it is seen what influence the Farm Board proposal to reduce acreage has on the planters. Whether the price recovery is simply a reaction from an oversold condition or is a reliable indication that all unfavorable factors have been discounted, it is impossible to say at the moment.

Receipt of further business on fine goods requiring Sak, and Pima cottons had little influence in the New Bedford district on additional purchasing. This, however, may appear at any time. Medium Uppers are firm at 20½-21c.; medium Sak. at 28-29c.; while Pima ranges from 33 to 34½c. New England buyers during the week showed interest in cottons ranging from 1 inch to 1 1/16 inch, of low grade or off color, at prices around 300 off the future market. In the better cottons, middling inch was bought at 200 on; middling 1 3/16 inch at 540 on, and strict middling of the same length at 725 on May. Middling 1¼ inch sold moderately around 900 on May.

Receipts of raw cotton in the chief New England centers for the six months ended Jan. 31 totalled 410,184 bales, as compared with 342,926 bales in the same period of the previous season. New Bedford receipts increased 77,100 bales, while Fall River receipts decreased 9,200 bales.

Wool Dealers Start Contracting

Plenty of Wool Likely to Be Available At Favorable Prices

BOSTON.

THE wool market is firmer than it was a week ago, not only in Boston but in several of the primary markets. The London wool sales closed five days earlier than was originally intended, with a better demand in evidence and the general price level above the low average. Domestic mills continue to buy the finer grades of territory wool, both staple and in original bags. Spot foreign wools are quiet and not over firm. Medium wools are under pressure. Low prices in the South American markets are operating to depress values of Ohio and similar medium-fleece wools in markets of this country.

Arizona Clip—Some interest is developing on Summer Street regarding the clip from Arizona, the first of the states to have early wool for sale. It is not known whether or not the Arizona Wool Growers Association will pledge their wool to the National Marketing Association. In any event the association is not likely to act as a unit, and some of the growers will undoubtedly sell their wool as usual to Summer Street houses. Some members of the trade are signing up small contracts in the West on a pre-shearing basis. It is believed that about 10,000,000 lb.

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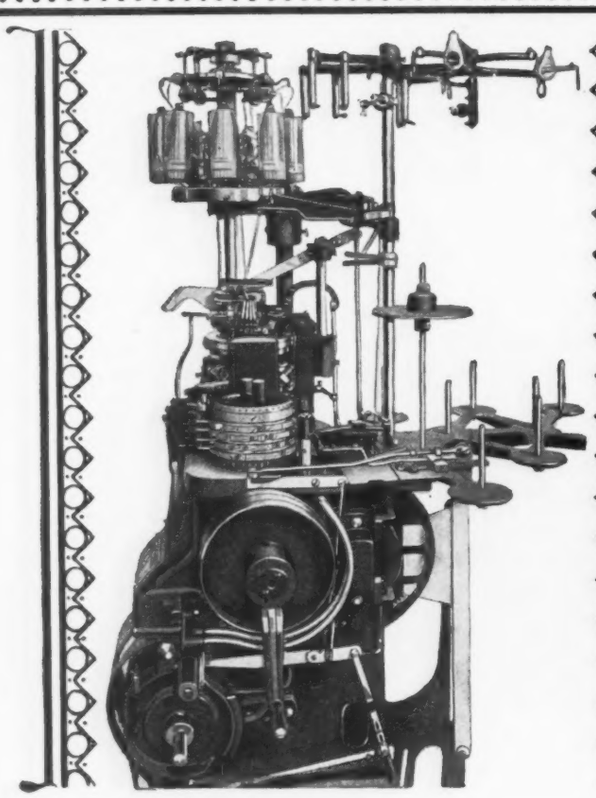

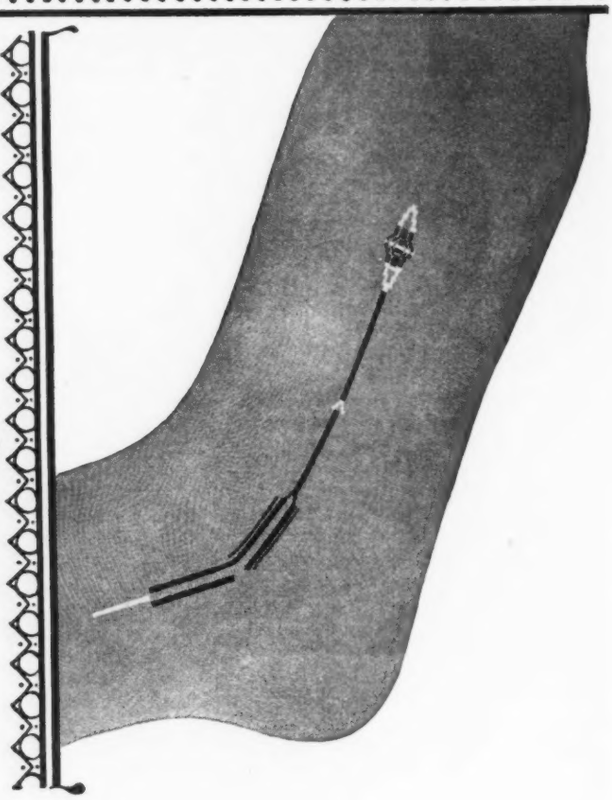

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See Also CONSOLIDATED TEXTILE CATALOG

THE BANNER AUTOMATIC KNITTING MACHINES

have been contracted for, with the usual allowance of $1 per fleece. The wool pool is signing up wool in fairly large quantities. Terms of the contract between the corporation and Draper & Co., Inc., will not become available to the members of the wool trade, being considered confidential in character.

There arrived from Australia recently about 1,500 bales of merino wool. Imports are running well behind the similar period last year, and this in spite of the fact that prices have been so low that Australian growers are taking steps to prevent any further slump in values. New Zealand also restricts offerings.

No Betterment—There is, however, no fundamental change for the better. Sentiment is assisted by slight increases seen in the Colonial markets, but there is nothing permanent about the day to day changes, and, in view of the large amount of wool still to be offered, the outlook does not favor a very much higher level either at home or abroad. At some of the Australian centers there is better competition, and at Melbourne and Sydney the recent trend has been upward. The slight advances noticeable cannot be considered as indicating a change in the current of affairs.

◆Carpet Wools On Lower Level

PHILADELPHIA.

ACCELERATED by drastic declines during recent weeks in South American markets and in China, carpet wools in domestic centers have dropped to lower levels than have been seen for several years. Carpet manufacturers are now able to buy carpet wools in clean condition at 30c. to 40c. Last year the clean cost varied between 45c. and 48c.

B. A. 6s which are used by the carpet trade have been dropping for the last few months and importers are offering this wool on a basis that means a clean cost of not more than 30c. This quality of carpet wool selling on such a clean basis was a factor in forcing quotations of East India and other wools used for carpet and rug purposes downward.

At the same time this was taking place, silver, the basis of Chinese currency, was declining throughout the world markets, which has had a decided effect in lowering the prices of Chinese wools to American consumers.

◆Talk of New Underwear Cut

HEAVYWEIGHT underwear producers deprecated the reports that the recent cut in cotton prices might bring a further reduction in finished garment quotations. Furthermore, a cut, if it did develop, would simply mean an increase in the fall when demand reached the high-pressure point, it was contended. The cut in cotton prices has had little effect on the heavyweight underwear production cost, as most of the larger mills had bought their yarns prior to the drop.

February heavyweight sales were ahead of 1929 in some instances, though the bulk of the trade found sales to be about equal in both periods. Buying was steady, but conservative. Mills have increased production somewhat, but real capacity output will not be under way for several months. Most of the mills expect to begin shipments in August and September. Heavyweight knitters noted a trend toward their low-priced lines, which was attributed to the industrial uncertainty.

Rayons and Balbriggans—Rayon and balbriggan underwear both were in a strong position. Rayons were selling actively for spot and spring shipment; prices were firm. Balbriggans were slow in starting, but they moved spiritedly during the week. Inquiry among some of the chief balbriggan firms revealed that current spring business about ties with that of the same period last year. The interest shown by jobbers and retailers in balbriggans during the last ten days has encouraged mill agents to look for steady buying from now on.

Balbriggans normally sell best in the March to May period, and knitters believe that business, now it has started, will continue into the active season. Balbriggan orders were for spot and nearby shipments.

Raw Silk Drops 5c. per Pound

Indifferent Demand on Market Brings Further Weakness

RAW silk showed little activity during the week. Broadsilk manufacturers were indifferent and placed few orders. The lull was even more pronounced at the knitting end; hosiery mills were covered for several months, and were not interested in further future commitments. Prices were soft, marking a general drop of 5c., sometimes more. The Canton 14/16s were being offered as low as $2.65. Raw silk importers were puzzled and disappointed; they had looked for a pick-up to follow the settlement of the dress trade strike.

The lull is not easily explained. Broadsilk mills are doing a steady business, and will be obliged to increase output soon to keep their spring and summer lines filled. These weavers have been buying hand-to-mouth from their raw silk sources, and are not believed to have much stock on hand. Importers are pinning their hopes on March, with the expectation that next month will spur buying.

Spotty Week on Exchange—Trading on the Raw Silk Exchange was spotty. Prices were low and weak, but there were no sharp fluctuations. There was a flurry of buying Feb. 11, with interest mostly in futures. Lincoln's Birthday broke the week, and the next day only 60 bales changed hands; prices were somewhat firmer and spots showed a slight advance. This improvement was maintained Feb. 15, and also into the current week, though buying generally was light. Tuesday brought a softening, with prices unchanged to 4c. lower. A 4000-bale sale on Wednesday brought the day's total to 5,440, setting a record on the Exchange.

Importers See No Early Rise—No early rise in prices was looked for, and importers were reconciled to a situation that was decidedly less favorable than at this time last year. Such firms as are not pressed to clear are holding off selling pending possible improvement of the raw silk market.

Hosiery Outlook Doubtful

Full-Fashioned Surplus Brings Drastic Price-Cutting

THE hosiery market, particularly at the women's full-fashioned end, presented an unsatisfactory picture during the past week. There was much price-cutting and bargaining; stocks were offered at figures decidedly below normal margin, and sometimes even below mill production costs. This activity, it is true, was limited to only a fair percentage of the industry, but it was widespread enough to bring about a general price weakness.

Mills that are in a strong position, thanks to conservative production policy, had difficulty in getting their list prices. The sales manager of one company in this group, said that he was refusing considerable "bargain" business in the hope that the market would strengthen shortly. He was not too optimistic, however, and though this type of mill is not flooded with goods to be "cleared at a price," an extended period of weakness may force them to yield.

Campaign for Curtailment—The feeling among the keener factors is that the situation will adjust itself, once the "price" business is off the market. The present surplus of course is due to overproduction, and the National Association of Hosiery and Underwear Manufacturers is waging a spirited campaign for curtailment. The latest "News-Letter" of that organization

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Sodium Bichromate
Sodium Perborate
Sodium Phosphate
Sodium Prussiate
Sodium Peroxide
Sodium Stannate
Sodium Sulphide
Sodium Sulpho Cyanide
Solozone
Trisodium Phosphate
Zinc Chloride
Zinc Sulphate
Zinc Dust

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Chloroform, Technical
Carbontetrachloride
Tetrachlorethane
Trichlorethylene
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10 East 40th Street, New York, N. Y.

cited the case of a group of mills which produced far in excess of normal sales expectations and were forced to "cut to clear" a particularly unsatisfactory situation not improved by the fact that the same mills were several months behind in their indebtedness to their raw silk creditors.

Figures just published by the Department of Commerce show that hosiery production registered a sharp drop last December, as against November. This was generally regarded as a healthy sign, and credit should go, in part at least, to the National Association; that organization saw the prospects of a weak spring and came out, shortly after the November stock exchange slump, with a strong recommendation for curtailment.

Call for Full-Fashioned—Women's full-fashioned demand at this time of the year is usually active, with a fair amount of Easter business already on the books. This year, Easter futures are light, due partly to the fact that Easter does not come until April 20, and partly to the general uncertainty. Knitters were confident that spring business would develop satisfactorily, once the price-cutting epidemic waned. Color trends in women's hose lean to in-between shades, such as dark tans and browns.

◆Outerwear Steady; Sweater Call Lightens

KNITTED outerwear was steady, with an easing off manifest in certain lines. Bathing-suits continued active, with business plentiful all week; men's navy and black speed suits were in good call, as were women's pastel sunbacks. The smaller bathing-suit firms were particularly active this week; there was no prospect of an early "sold-up" condition at this end, and neither jobber nor retailers had any difficulty in placing orders.

Fancy sweaters were still moving, but at a less accelerated speed than last week; the let-up appeared to be a temporary condition, as many distribution outlets were not yet covered on spring and early summer requirements; fancies are expected to register strong again within a couple of weeks. Prices were steady. Demand stressed jersey ribbed lines; crickets and polos were stressed, though the latter has not yet shown its expected strength. Current sweater buying inclined toward plains and away from jacquards; reds and browns led.

Heavyweight sweaters for fall were more active, but commitments were limited to small orders.

Heavy Print-Cloth Buying

Goods Move Upward With Cotton; Later Recede Also in Sympathy

Last week was probably the best the cotton-goods market has experienced this year. Sentiment improved considerably due to a firm and rising raw-cotton market, which brought in its wake a heavy ordering of gray goods. This increased activity, however, was confined to the staple print-cloth constructions, of which the 38½ in. 64x60s accounted for around half of the total volume. A few twills were reported sold, but no improvement was noted by sellers of dobbies and piques.

Print Cloths—Under heavy selling, prices had improved one-quarter cent by Saturday, but a reaction in cotton early in the current week proved a disquieting factor. Buyers and sellers are watching the staple market in the closest way imaginable; the slightest decline brings forth a renewed bear pressure on the part of buyers. There were rumors on Monday, which were substantiated the following day, that print-cloth quotations had receded one-eighth cent. It was not certain at that time, however, whether first or second hands had participated. The biggest part of the previous week's business was for contracts running through March and April, with some commitments on 64x60s running through June.

Sheetings—While there was an improved feeling in sheeting circles, net results were scarce. No important business was transacted and prices showed no gains.

Jobbers—A few jobbers reported that retail business was none too good; in fact, January white-goods sales with many retailers had proved more or less of a "flop," and left a substantial quantity of merchandise on the shelves.

Blanket buying has not proved to be very active as yet. Wholesalers tell of going around the various houses inspecting lines, but few have much to say regarding the quantity of business placed. Purchasing seems to be heavily retarded by caution.

◆American Woolen Reduces Men's Staple

DOWNWARD readjustment of prices in serges, unfinished worsteds, cheviots, French-backs, and pencil strip serges, was put into effect by The American Woolen Co. on Tuesday. In a statement to the trade the company mentioned that the continued decline in the wool market was sufficient to justify this revision. The new prices on these fabrics in Dept. 1 and 2 were effective immediately.

This was adjudged a constructive move by many in the market, as it puts fabrics on a basis reflecting raw wool values and tends to stimulate buying. Others felt that the big company had used every effort to stabilize the market for staple worsteds, but had been undersold by competitors who opened later. Unless the American was willing to "hold the umbrella" they had no other course to pursue.

Although wool-goods trading was of only moderate proportions last week, sellers commented that it showed material improvement over that of thirty days ago. In the men's popular-priced division there were reports of large-sized orders. It must be added, however, that such business was restricted to a comparatively few mills specializing on worsteds selling between $2.50 and $3 a yard.

Overcoating—Some scattered business was placed on overcoatings last week, but there is little in the way of new developments that can be mentioned regarding this field. Important buying is still lacking, and there appears to be the usual confusion regarding style trends. Several weavers have frankly stated their apprehension of further inroads on their business by the knitted fleeces.

◆Strike End Brings Broadsilk Activity

THE settlement of the dress-trade strike brought increased activity to the New York broadsilk market this week. Cutters who had suspended commitments, pending the dispute, resumed production and in some instances increased output schedules.

The general outlook in the dress trade, from the silk weaver's point of view, is now very good. Ready-to-wear manufacturers were buying yardage quite spiritedly; the real high pressure spring call has not developed and it probably will be late in coming, due to the strike, but the prospects are satisfactory. The new long dress style has sharpened consumer interest and retailers report a good turnover on their early offerings.

Prints in Steady Call—Spring and summer prints were moving steadily; this included the crepes, radiums and sheers. Wide spaced florals were favored, especially in chiffons; these fabrics sold best in light blues, pale greens and other pastels. Chiffon demand was strong, both spot and future.

Flat Chiffons Preferred: An interesting feature was the trend toward flat chiffons instead of crinkled. Of the current active call for chiffons, the bulk of orders specify flats.

Dots Continue Popular—Dots continued in demand for sportswear manufacture, the trend being toward blue-and-white and other staples. Novelties were still selling, but less actively.

QUOTATIONS

at close of business, Feb. 19, 1930

Prices cover average qualities unless otherwise stated

Cotton Goods

	Feb. 19	Feb. 11	Feb. 20 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60..	4⅛	−4½c.	4⅛c.	5½c.
38½-in., 64x60, 5.24..	6⅛	−6½c.	6⅛−6½c.	7½c.
39 -in., 68x72, 4.75..	7⅛	−7½c.	7⅛−7½c.	8½− 8¾c.
39 -in., 72x76, 4.25..		8½c.	8½c.	9¼c.
39 -in., 80x80, 4.00..	9	−9¼c.	9 c.	10⅛−10½c.
BROWN SHEETINGS			
36-in., 56x60, 4.00...		7⅛c.	7⅛−7⅜c.	8½−8⅝c.
36-in., 48x48, 3.00...		9¼c.	9¼c.	10½c.
37-in., 48x48, 4.00...		7−7⅛c.	7 c.	8−8⅛c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70..		7⅛−7⅜c.*	7⅛-7⅜c.	8⅛−8½c.
36½-in., 64x60, 5.75..		6¼c.†	6¼c.	7¼c.
MISCELLANLOUS			
Drills, 37-in., 3 yd....		9½c.	9⅝c.	11⅛c.
Denims, 2.20.....		15c.	15 c.	17½c.
Tickings, 8 oz.....		19½c.	19½c.	21½−23c.
Standard prints.....		9½c.	9½c.	9c.
Eastern staple ginghams, 27-in.....		10c.	10c.	10½c.

Cotton Waste

Peeler comber	13½—14
Peeler strips	12 —12½
Sak. comber	12 —12½
Choice willowed fly	6 — 7
Choice willowed picked	5 — 6
Sak. strips	15 —15½
Linters (mill run)	4 — 4½
White spooler (single)	9 —10

Cotton Yarn

CARDED—(Average Quality)

Double carded 2c.–4c. higher according to quality

SINGLE SKEINS OR TUBES—(Warp Twist)

4s to 8s..	$0.27 −0.27½	20s.....	$0.30 −0.30½
10s.....	.27½− .28	24s.....	.32 − .32½
12s.....	.28 − .28½	26s.....	− .33
14s.....	.28½− .29	30s.....	.35 − .35½
16s.....	.29 − .29½	40s ex.qual.	.48½− .49

TWO-PLY SKEINS AND TUBES

8s-2.....	$0.27	26s-2.....	$0.34½− .35
10s-2.....	− .27½	30s-2.....	.35½− .36
12s-2.....	.28 − .28½	36s-2.....	− .43
14s-2.....	− .29	40s-2.....	− .44
16s-2.....	.29½− .30	40s-2 hi b'k	.49
20s-2.....	− .31	50s-2.....	− .52
24s-2.....	.33½− .34	60s-2.....	− .60

SINGLE WARPS

10s.....	$0.27½−0.28	24s.....	$0.32½
12s.....	.28 − .28½	26s.....	− .33½
14s.....	.28½− .29	30s.....	− .36½
16s.....	.29 − .29½	40s ex.qual.	− .49
20s.....	.30 − .30½		

TWO-PLY WARPS

8s-2.....	$0.27½−0.28	24s-2.....	$0.34 −0.34½
10s-2.....	.28 − .28½	26s-2.....	− .35
12s-2.....	− .29	30s-2.....	− .36
14s-2.....	− .30	40s-2 ordin.	− .44
16s-2.....	.30 − .30½	50s-2.....	− .52
20s-2.....	.31 − .31½	60s-2.....	− .60

8s-2 and 4-ply skeins and tubes; tinged, .24; white .26; waste .23

HOSIERY CONES (Frame Spun)

8s.....	$0.26½	22s.....	$0.30½
10s.....	.26½− .27	24s.....	.31½− .32
12s.....	.27 − .27½	26s.....	.33 − .33½
14s.....	.28 − .28½	30s tying...	− .34
16s.....	.28½− .29	30s reg.....	− .35½
18s.....	.29 − .29½	30s ex.qual.	.36½− .37
20s.....	.29½− .30	40s.....	− .43

COMBED PEELER—(Average Quality)

WARPS, SKEINS AND CONES

	Merc. Tw.	Wp. Tw.		Merc. Tw.	Wp. Tw.
20s-2.....	$0.44 − .45		60s-2.....	$0.63 − .64	
30s-2.....	.49 − .50		70s-2.....	.73 − .74	
36s-2.....	.50 − .51		80s-2.....	.85 − .86	
40s-2.....	.51 − .52		90s-2.....	1.02 −1.08	
50s-2.....	.56 − .57		100s-2.....	1.29 −1.33	

SINGLES

12s.....	$0.37	30s.....	$0.46½−0.47½
14s.....	− .37½	38s.....	− .49½
16s.....	− .38	40s.....	.50½− .51½
18s.....	− .38½	50s.....	.55 − .56
20s.....	− .39½	60s.....	.62 − .63
24s.....	− .42	70s.....	.72 − .73
28s.....	− .45	80s.....	.84½− .85

MERCERIZED CONES—(Combed, Ungassed)

26s-2.....	$0.62 −0.64	90s-2.....	$1.45 −1.50
30s-2.....	.63 − .65	100s-2.....	1.75 −1.80
36s-2.....	.66 − .67	120s-2.....	2.15 −2.20
40s-2.....	.68 − .70	30s.....	.77 − .80
45s-2.....	.71 − .73	40s.....	.82 − .84
50s-2.....	.73 − .75	50s.....	.87 − .90
60s-2.....	.82 − .85	60s.....	.94 − .99
70s-2.....	.97 −1.00	70s.....	1.10 −1.15
80s-2.....	1.09 −1.12	80s.....	1.32 −1.37

COMBED REVERSE TWIST THREAD YARNS

(Skeins, Tubes or Cones, 2, 3 and 4-Ply)

	Peeler		Sakelarides	
	Average	Best	Average	Best
24s.....	$0.50–$0.51	$0.59	$0.71	$0.76
30s.....	.53– .54	.62	.74	.79
36s.....	.55– .56	.64	.77	.82
40s.....	.60– .61	.68	.81	.86
45s.....	.65– .66	.73	.86	.91
50s.....	.70– .71	.78	.91	.96
60s.....	.80– .81	.88	1.01	1.06

Cotton Prices and Statistics

FLUCTUATIONS OF FUTURES

	Closed Feb. 13	For Week—High	For Week—Low	Closed Feb. 19	Net Closed
February..	15.61	15.73	15.20	15.20	—.41
March.....	15.70	15.91	15.21	15.30	—.40
April.....	15.82	15.94	15.42	15.42	—.40
May.....	15.97	16.16	15.46	15.57	—.40
June.....	16.03	16.16	15.65	15.65	—.38
July.....	16.13	16.36	15.67	15.76	—.37
August.....	16.18	16.31	15.80	15.80	—.38
September.	16.24	16.37	15.85	15.85	—.39
October....	16.32	16.54	15.85	15.94	—.38
November.	16.40	16.51	16.00	16.00	—.40
December..	16.50	16.70	16.05	16.13	—.37
January...	16.46	16.65	16.10	16.18	—.28

MIDDLING SPOT FLUCTUATIONS FOR WEEK

	New York	New Orleans	Liverpool
Friday, Feb. 14.....	15.85	15.48	8.69
Saturday, Feb. 15.....	15.90	15.48	8.78
Monday, Feb. 17.....	15.65	15.29	8.68
Tuesday, Feb. 18.....	15.65	15.29	8.54
Wednesday, Feb. 19.....	15.40	15.04	8.57
Thursday, Feb. 20.....	15.40	15.12	8.46

SPOT FLUCTUATIONS AND STOCKS

Market	Feb. 11	Feb. 19	Sales	Stocks This Week	Stocks Last Year
Galveston....	15.95	15.55	3,472	378,898	493,414
New Orleans	15.41	15.04	11,193	500,348	358,726
Mobile.....	15.30	14.85	685	36,828	38,930
Savannah...	15.47	14.99	1,000	65,520	40,330
Norfolk.....	15.81	15.38	592	67,939	95,953
New York..	15.90	15.40	2,450	97,149	85,936
Augusta....	15.81	15.38	607	96,308	78,138
Memphis...	14.95	14.55	11,722	395,730	255,955
St. Louis....	15.00	14.75	.....	13,880	27,222
Houston....	15.90	15.45	16,243	989,527	849,830
Dallas.....	15.25	14.75	9,040	.....	.....

BASIS MIDDLING

	Saturday Feb. 15	Saturday Feb. 8
10 markets average	15.42	14.98
Memphis	15.05	14.45

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominally Steady
1⅛-in	18.75–19.00c.
1 3/16-in	19.60–20.00c.
1¼-in	23.75–24.00c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	20,112	8,388	14,643
F.o.b. included in total	15,241	7,367	12,504
10 markets	56,056	41,381	43,394

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	12,843	13,497	11,649
Gross receipts	35,231	45,012	36,817
Total since Aug. 1, net.	819,422	706,173	546,605
Shipments	44,537	58,587	57,549
Total since Aug. 1	1,260,198	1,225,899	1,053,328
Total stock	398,500	257,021	235,667
Decrease for week	9,306	13,575	732
Unsold stock in hands of Memphis factors	50,387	.....	.....
Decrease for week	3,788	.....	.....

AVERAGE PRICE FEB.-MARCH SHIPMENT HARD WESTERN COTTON

	Middling	St. Middling
1 1/16 in	18½–19c.	19½–20c.
1⅛ in	19½–20c.	20½–21c.
1 3/16 in	20½–21½c.	22 –22½c.
1¼ in	25 –26c.	27 –28c.

Basis of New York, May, 15.56c.

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F.....	1.05†	.90†	1.00†	1.25†	1.07†
S. G. M.....	.90†	.65†	.90†	1.00†	.89†
G. M.....	.75†	.50†	.75†	.75†	.72†
S. M.....	.50†	.35†	.50†	.50†	.50†
S. L. M.....	.75*	.75*	.85*	.75*	.75*
L. M.....	1.75*	1.50*	1.75*	2.00*	1.70*
S. G. O.**....	3.00*	2.50*	2.75*	3.25*	2.80*
G. O.....	4.00*	3.50*	3.75*	4.25*	3.78*

YELLOW TINGED

G. M.....	.50*	.50*	.50*	.50*	.50*
S. M.....	1.00*	1.00*	1.00*	1.00*	1.00*
M.**.....	1.75*	1.50*	1.50*	1.50*	1.60*
S. L M.**....	2.50*	2.00*	2.25*	2.25*	2.27*
L. M.**.....	3.25*	3.00*	3.00*	3.00*	3.15*

YELLOW STAINED

G. M.....	1.50*	1.50*	1.50*	1.50*	1.50*
S. M.**.....	2.25*	2.25*	2.50*	2.50*	2.35*
M.**.....	3.00*	2.75*	3.50*	3.50*	3.15

BLUE STAINED

M. G.**.....	1.75*	1.25*	1.75*	1.75*	1.65*
S. M.**.....	2.25*	2.00*	2.75*	2.75*	2.40*
M.**.....	3.00*	2.50*	3.75*	3.75*	3.18*

**Grades not deliverable on contract. †On Middling. *Off Middling.

EGYPTIAN COTTON

February-March Shipment c.i.f.	Boston	Change
Fully good fair Sak	29.80	—0.15
Fully good fair to good uppers	22.05	—0.05
(By John Malloch & Co.)		
Alexandria Exchange, Feb. 12		
March Sak	27.50	—0.01
April uppers	19.43	.....

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA

Fine delne.	$0.33 –$0.34	¾ blood	$0.36 –$0.37
Fine clthg.	.24 – .25	¼ blood	.36 – .37
½ blood	.35 – .36		

TEXAS AND CALIFORNIA

Texas, 12 months	$0.75 –$0.78
California, Northern	.70 – .72

PULLED—EASTERN (SCOURED BASIS)

A.A.	$0.83 –$0.85	B-Super	$0.65 –$0.70
A-Super	.75 – .78	C-Super	.58 – .60

MONTANA, IDAHO AND WYOMING (SCOURED BASIS)

Staple fine	$0.78 –$0.80
Staple ½ bld	.76 – .78
Fine and fine medium	.73 – .75
¾ bld. blood	.68 – .70
½ blood	.65 – .67

MOHAIR—DOMESTIC

Best carding	$0.40 –$0.43
Best combing	.57 – .60

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.35 –$0.38
Cape firsts	.35 – .38

FOREIGN CLOTHING AND COMBING (IN BOND)

Australia:	
70s	$0.71 –$0.73
64s	.58 – .60
58s-60s	.51 – .53
Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.24 – .25
Buenos Aires:	
4s, 40-44s	$0.21 –$0.22
5s, 36-40s	.18 – .19

FOREIGN CARPET (GREASE BASIS IN BOND)

China: Combing No. 1	$0.23 –$0.24
China Filling Fleece	.22 – .24
Szechuen ass't	.23 – .24
Cordova	.20 – .22
Scotch black face	.23 – .24
East India: Kandahar	.32 – .34
Vican'r	.37 – .39
Joria	.37 – .39
Aleppo	.35 – .36

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$1.00 – 1.05
2-24s, 40s	1.10 – 1.15
2-26s, 44s	1.20 – 1.25
2-28s, 46s	1.22½ –1.27½
2-30s, 48s	1.32½– 1.37½
2-32s, 50s	1.35 – 1.37½

(Single yarns 5c. less than above)

2-36s, 58s	1.52½– 1.55
2-40s, 60s	1.57½– 1.60
2-40s, 64s	1.60 – 1.62½
2-50s, 66s	1.82½– 1.87½
2-60s, 70s	2.30 – 2.35

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$1.10 –$1.15
2-20s, 50s in oil	1.22½– 1.25
2-20s, 56s in oil	1.37½– 1.42½
2-20s, 60s in oil	1.52½– 1.55
2-20s, 64s in oil	1.57½– 1.62½
1-15s, 46s dyed	1.30 – 1.32½
1-15s, 48s dyed	1.32½– 1.35

FRENCH SYSTEM

1—20s, 58s	$1.35 –$1.40
1—20s, 60s	1.40 – 1.45
1—26s, 64s	1.45 – 1.47½
1—30s, 60s. . Warp	1.55 – 1.57½
1—30s, 64s. . Warp	1.60 – 1.62½
2—30s, 64s. . Fancy mixes	1.80 – 1.85
2—40s, 64s. . Zephyrs	1.75 – 1.77½
1—50s, 66s	1.75 – 1.80
2—50s, 66s	1.87½– 1.90
1—60s, 70s	2.17½– 2.22½
2—60s, 70s	2.32½– 2.37½

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.15 –$1.17½
1-40s, 50-50-60s on cops	1.30 – 1.32½
1-40s, 50-50-64s on cops	1.32½– 1.35
1-40s, 50-50-64s Australian cops	1.35 – 1.40

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

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Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$1.03 –$1.05
Half-blood (60-62s)	1.00 – 1.03
High ¾ blood (58s)	.98 – 1.00
Aver. ¾ blood (56s)	.95 – .98
Low ¾ blood	.95 – .97
High ¼ blood (50s)	.93 – .95
48s N. Z.	.91 – .93
46s S. A. and N. Z.	.88 – .90
44s S. A. and N. Z.	.83 – .85
40s S. A. and N. Z.	.81 – .83
36s S. A. and N. Z.	.80 – .82

TOPS—BRADFORD, ENG. (FEB. 15)

Fine (70s)	33d	¾ bld. (56s)	22 d
Fine (64s)	30d	½ bld. (50s)	18½d
½ bld. (60s)	28d	Cross-bred (46s)	15 d
¼ bld. low (58s)	25d		

NOILS—BOSTON

Fine	$0.53–$0.58	Low ¾ bld.	$0.47–$0.50
Half-bld	.53– .55	High ¼ bld.	.45– .47
High ¾ bld.	.50– .53	46s	.43– .45
Aver. ¾ bld.	.48– .50	44s	.42– .43

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.80 –$0.83
Lap, fine colored	.68 – .70
Thread White Worsted, fine	.63 – .65
Thread White Worsted, ½ blood	.43 – .45
Thread Colored Worsted, fine two-ply	.36 – .38
Thread Colored Worsted, ½ bld., two-ply	.28 – .30
Card, fine White	.35 – .38
Card, Medium White	.25 – .27

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.06 –$0.07
Merinos, Fine Dark	.05 – .05½
Merinos, Fine Light	.16½– .17½
Serges, Blue	.08½– .09
Serges, Black	.08 – .08½
Serges, Red	.11½– .12½
Knit, White	.34 – .35
Knit, Red	.18 – .19
Knit, Light Hoods	.19 – .20
Worsted, Lights	.06 – .07
Worsted, Blues	.10 – .10½
Worsted, Blacks	.09 – .10

Silk Yarns

THROWN SILK (60 day basis)

Japan organzine, 2 thd. grand XX in skeins	$6.15
Japan organzine, 2 thd. sp. crack in skeins	5.90
Japan crepe, 3 thd. grand XX in bobbins	6.25
Japan crepe, 3 thd. sp. crack on bobbins	5.90
Japan crepe, 4 thd. crack on bobbins	5.85
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	3.90-3.95
Tussah tram, 2 end on cops	2.55
Hosiery tram, 3 thd. Japan XXX	6.60
Hosiery tram, 5 thd. Japan G XX	5.90
Hosiery tram, sp. crack XX	5.50
Hosiery tram, crack XX	5.40
Hosiery tram, XX	5.30

SPUN SILK YARNS—(Terms: net 30)

40/2	$4.25	60/2	$4.55
50/2	4.40	62/2	3.50

Raw Silk

(60 day basis)

Japan filature, grand XX, 13/15	$5.10
Japan filature, sp. crack XX, 13/15	5.00
Japan filature, crack XX, 13/15	4.80
Japan filature, XX, 13/15	4.75
Japan filature, best X, 13/15	4.65
Japan filature, X, 13/15	4.55
Canton filature, new style, 14/16	2.85
Canton filature, new style 20/22	2.75
Tussah filature, 8 cocoon	1.90
Grand XX (Yellow) 20/22	4.80
Grand XX (White) 20/22	4.75
Sp. crack (Yellow) 20/22	4.75
Sp. crack (White) 20/22	4.75
Crack (Yellow) 20/22	4.75
Crack (White) 20/22	4.65

NATIONAL RAW SILK EXCHANGE

	Close Feb. 11	For the Week High	Low	Close Feb. 18	Net Chg.
February	4.53	4.58	4.44	4.53	....
March	4.53	4.54	4.46	4.47	—.06
April	4.51	4.54	4.47	4.48	—.03
May	4.49	4.51	4.43	4.46	—.03
June	4.47	4.49	4.42	4.44	—.03
July	4.46	4.46	4.39	4.39	—.07
August	4.42	4.44	4.39	4.39	—.03
September	4.43	4.46	4.38	4.39	—.04

Total contracts 258. Total number of bales, 2,580.
Total approximate value, $1,548,000.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First Quality	Second Quality
75	18	$2.35	$1.65
75	30	2.45	1.75
100	18	1.95	1.60
100	40	2.00	1.65
125	18	1.45	1.25
125	36	1.50	1.30
150	24–32	1.15	1.10
150	36	1.20	1.15
150	60	1.35	1.30
150	75	1.50	.....
170	24–27	1.15	1.10
170	60	1.35	1.30
200	30–32	1.10	1.05
200	60	1.30	1.25
300	40–60	1.00	.95
400	72	1.10	.95
450	54	1.00	.95
600	72–96	1.00	.95
900	100–144	1.00	.95

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
35	$3.50	$3.25	125	$1.45	$1.25
50	2.75	2.50	140	1.15	1.10
75	2.35	1.65	150	1.15	1.10
100	1.95	1.60	160	1.15	1.10
			175	1.15	1.10

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$4.15	40	30	$3.15
25	25	3.65	52	30	3.00
30	25	3.40			

(Due to diversified offerings prices for higher denier are not listed.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

Open bleached waste	$0.30
Open unbleached waste	$0.24 – .26
Bleached thread waste (mfs.)	..... .15
Bleached thread waste (misc.)	..... .11
Colored thread waste	.08 – .10
Colored clips	..... .12

CONVERTED RAYON WASTE

Bleached tops	$0.59 –$0.60
Unbleached tops	.51 – .52
Bleached noils	..... .22
Bleached garnets	.23 – .25
Unbleached garnets	.21 – .23
Colored garnets	.16 – .20

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For Cotton
or
Rayon

NATIONAL SOLANTINE VIOLET FFR

This new National Dye produces bright violet shades, of a reddish tone, possessing very good fastness to light.

A bulletin of technical information concerning National Solantine Violet FFR is available to dyers on request.

NATIONAL DYES

NATIONAL ANILINE & CHEMICAL COMPANY, Inc.

40 Rector Street New York, N. Y.

CHICAGO
PHILADELPHIA
BOSTON
PROVIDENCE
TORONTO
CHARLOTTE
SAN FRANCISCO

Warp Knitting Machines

(Continued from page 41)

machine. In Fig. 180 is shown a vertical cross-section through a circular stationary cylinder 1, which is slotted to receive the needles 2. The needles are free to move endwise and are equipped with butts which are acted upon by a reciprocating ring 3. This ring is capable of raising the needles en masse high enough to clear their latches from the fabric and low enough to cast off the new loops over the top of the cylinder. Centrally disposed and above the needle cylinder is a fixed ring or support 4, which carries the warp thread carrier ring 5. This ring 5 carries the inner warp-thread carrier ring 6. These rings are free to be rotated step by step in opposite directions in the same manner that the eye-needles of flat warp machines are rotated. They are equipped with holes at their upper and lower ends for the passage of the warp threads.

There is further provided the disk 7, having blade-like ends *7a* which register between the needles. The disk is centrally disposed in relation to the needle cylinder, with the blades *7a* operating always between the same needles, and is provided for the purpose of lowering the warp threads as they are wrapped around the needles to make certain that the threads are grasped by the needle hooks. It could also be used for holding down the fabric as the needles rise.

The method of operation is clearly shown in Fig. 181. View 1 shows the needles below the top of the needle cylinder, in which position they have cast off the previously formed set of loops with the new set of loops in their hooks. At this time the blades *7a* are in their highest position out of thread contact.

The needles are then raised; and, before the loops held by the needles clear the tip of the latch, the warp rings 5 and 6 move in opposite directions. The amount of shift depends on the type of loop structure desired. As the needles continue to rise, the disk 7 is lowered in order to insure the yarns being properly wrapped around the needles, as shown in view 2.

As shown in view 3, the needles attain their highest position with the disk in its lowest position. It will be noticed that the tip of the latch is not raised above the feeding warp threads in this highest needle setting.

Thereafter the needles are drawn down. As soon as their hooks have grasped the warp yarns, the disk 7 with its members *7a* is raised to its highest position with the needles continuing down to and below the knockover. All this is shown in view 4. In this manner another course of loops is formed.

It is quite obvious that machines of this type can be operated at extremely high speeds. They can of course be built in any diameter. Any type of fabric capable of being produced with two sets of warp threads can be knitted on them. Further, a great number of warp-thread rings could be used, and also loom-like warp and filling threads could be fed and interknitted by the loops formed by the needles.

This article is the 25th of Mr. Miller's series, "Principles of Knit Fabric Production," a comprehensive study of the past, present, and future of knitting mechanism. All rights to the use of this treatise are reserved. Previous articles appeared Jan. 23, Mar. 27, May 15, July 24, Sept. 18, and Nov. 20, 1926; Feb. 19, Apr. 9, June 18, Aug. 20, Oct. 22, and Dec. 24, 1927; Feb. 18, June 23, Aug. 18, Oct. 20, and Dec. 22, 1928; Feb. 16, Mar. 23, Apr. 20, June 22, Aug. 24, Oct. 19, and Dec. 21, 1929. The succeeding articles of this series will discuss various knitting machines in detail, beginning with the Cotton type for knitting full-fashioned hosiery.

Joins Cannon Mills Sales Organization

Harvey Matthews has become associated with Cannon Mills, Inc., as a member of their sales department. Mr. Matthews will assist in covering the Philadelphia territory offering to the trade the complete yarn line handled by this company.

Bemberg-Glanzstoff Output Cut 15%

Announcement of a 15% reduction in output of synthetic yarn by the cuprammonium process was made this week by S. R. Fuller, chairman of the board of the American Bemberg Corp. and American Glanzstoff Corp. This cut is being put into effect at the plants of these companies at Elizabethton, Tenn. Mr. Fuller said the cut had been made for inventory adjustments.

Ala.-Miss.-La. Division of S.T.A. to Meet at Montgomery

The meeting of the Alabama-Mississippi-Louisiana Division of the Southern Textile Association, which was announced recently for Feb. 28, will be held at the Chamber of Commerce Auditorium, Montgomery, Ala., on the above date. Luncheon will be served at the Whitley Hotel.

D. Singleton Cook, Opelika, Ala., chairman of the division, will preside at the meeting which will include discussion of carding and spinning problems. An attendance of more than 200 textile men is expected.

Hampton Co., Appoints New Representative

Benjamin H. Rehbaum, formerly president of the Resolute Knitting Mills, Philadelphia, has become connected with the Hampton Co., Easthampton, Mass., as a member of their selling organization. Mr. Rehbaum will represent the Hampton Co., in Reading, Pa., and the surrounding territory, offering to manufacturers in that section the mercerized and rayon yarns produced by them. Mr. Rehbaum is well known in knitting circles, having recently sold his machinery to Superior Knitting Mills, Griffin, Ga.

Interesting Meeting Planned for Georgia Operating Executives

The spring meeting of the Textile Operating Executives of Georgia, an organization composed of the superintendents and department heads of the cotton mills of Georgia, will be held on Tuesday, March 11, at the Georgia School of Technology, Atlanta, Ga., according to recent announcements.

Practical subjects pertaining to the carding and spinning departments of the mill will be covered in round-table discussion. Experiences will be related as to the use of oil spraying on raw cotton, and practices with reference to correcting the weight of picker laps to maintain uniformity in yarn sizes will be covered.

Various kinds of card clothing, including the metallic licker-in type and the straight wire clothing, will be thoroughly discussed by mill men who have conducted exhaustive experiments on them in mill practice.

The use of spiral gears on roving frames, as well as the chain drive in this application, card stripping systems, clearers on drawing frames, card drafts, picker drafts and settings, etc., are among the other carding subjects.

The use of cork covered rolls in both carding and spinning rooms will be reported upon, and there will also be discussion of the problems of running raw stock-dyed cotton in the carding and spinning departments.

Long draft spinning, large package spinning, and comparative tests on clearers on spinning frames are among the items slated for discussion at the spinning session. Comparative experiences concerning individual-motor drive and four-frame group drives on spinning and roving frames will also be given.

It is planned at this meeting to discuss the possibility of forming, in addition to the present discussion groups on carding, spinning, slashing and weaving, a branch to devote itself to the consideration of power plants and mechanical problems of the mill, and to be composed of the engineers and mechanics.

D. D. Towers, superintendent, Anchor Duck Mills, Rome, will conduct the spinning discussion, and E. H. Rogers, agent, Fulton Bag & Cotton Mills, Atlanta, Ga., will have charge of the discussion on carding.

The present officers of the association are: Frank E. Heymer, superintendent, Piedmont Cotton Mills, Egan, Ga., general chairman; Frank K. Petrea, superintendent, Swift Mfg. Co., Columbus, Ga., vice general chairman; and Robert W. Philip, editor *Cotton*, Atlanta Ga., secretary-treasurer. The executive committee consists of E. H. Rogers, and W. R. Holt, assistant superintendent, Muscogee Mfg. Co., Columbus Ga.; George S. Elliott, superintendent, Pacolet Mfg. Co., New Holland, Ga.; Albert Lehmann, Jr., superintendent, Dixie Cotton Mills, La Grange, Ga.; and Walter B. Dillard, Jr., superintendent, Peerless Cotton Mills, Thomaston, Ga.

INDO CARBON CL conc.
INDO CARBON CLG conc.

THESE blacks are members of a special new group of sulphide blacks which possess the advantage over the ordinary sulphide blacks of producing shades of *excellent fastness to prolonged storing, hot steaming, ironing and acid cross-dyeing.*

The dyeings of Indo Carbon CL Conc. and CLG Conc. are *very fast to washing, boiling, ironing, stoving, alkalies, and mercerizing.*

The good *fastness to chlorine,* in which they surpass all other sulphide blacks, deserves special mention. As a result, Indo Carbon CL Conc. and CLG Conc. may be used for dyeing goods required to stand bleaching in the piece, provided due care is exercised in the method of working.

Vat Color Fastness

GDC

GENERAL DYESTUFF CORPORATION

Sole Distributors in the U. S. A. of the dyestuffs manufactured by
I. G. FARBENINDUSTRIE AKTIENGESELLSCHAFT
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NEW YORK OFFICE: 230 Fifth Avenue

BOSTON PROVIDENCE PHILADELPHIA CHARLOTTE CHICAGO SAN FRANCISCO

Joint Meeting of American Chemical Society and A.A.T.C.C.

PROVIDENCE, R. I.—A joint meeting of the American Chemical Society and the American Association of Textile Chemists and Colorists was held Friday evening, Feb. 14, in the offices of the Providence Engineering Society. The meeting was presided over by E. L. Wilson, chairman of the Rhode Island Division of the American Chemical Society. The feature of the evening was an address on silk chemistry, by E. M. Shelton, chief chemist of Cheney Bros., South Manchester, Conn.

Mr. Shelton dwelt principally on the facts which are yet to be discovered regarding the chemical reactions which take place within the silkworm as it converts the mulberry leaf into fibroin and sericin. An interesting fact that has been discovered regarding the composition of silk, Mr. Shelton stated, is that sulfur is not included among the elements contained in it. This fact is rather unique among the proteins and Mr. Shelton believes that it may prove that sulfur is unnecessary in the nutrition of human beings.

He believes that there may be some amino acids in silk which are as yet unknown and that at some future time carbohydrate groupings may be found in the sericin. Many of the physical properties of silk, the speaker remarked, are very similar to those of rubber, and he believes that studies made on the subject of rubber preservation will prove to have some application in the preservation of silk.

Mr. Shelton described experiments which have been conducted in coagulating silk and spinning it like rayon, later weaving it into fabric. He believes that it will never prove commercially practical to produce silk in such a manner, as the proteins necessary for manufacturing silk are much more difficult and expensive to obtain than is the raw material required for rayon manufacture.

Sees Progress in Unionization of Workers in Canadian F. F. Hosiery Mills

An effective organization of all full-fashioned hosiery workers in most of the important mills in the Province of Ontario is said to be foreshadowed as a result of the return to work this week of the operatives in the Mercury mills of Hamilton where a strike was caused by the refusal of the employes to sign a "yellow dog contract," according to William Smith, secretary-treasurer of the American Federation of Full Fashioned Hosiery Workers, Philadelphia, on receipt of a telegram from Organizer Carl Holderman in Hamilton, Ont. Mr. Smith said that Holderman also reported that a committee has been elected to represent the Mercury employes and has been recognized by the firm; that the entire force of knitters and toppers in this plant has joined the Union and practically the entire force in the National (Real Silk) Mill has also joined as a result of the victory of the Mercury employes; that workers in London and Guelph are joining up rapidly; and that he is convinced that within a short time the full-fashioned plants in Ontario will be entirely organized.

Seventieth Birthday of W. H. Baldwin Is Celebrated

A surprise party was engineered by the employes of Woodward, Baldwin & Co., New York, on Feb. 11, in honor of the seventieth birthday of William H. Baldwin, senior member of that firm of cotton goods commission merchants. The plans were so carefully guarded that Mr. Baldwin had no inkling of what was in store until he was taken to the Planters Restaurant by Wm. F. Irwin and E. F. Wilmerding.

Dinner started at 7 o'clock and the party did not break up until nearly midnight. E. T. Bynner was toastmaster, and read fifty-odd telegrams received from friends. Mr. Baldwin was the recipient of a traveling clock presented by his admirers.

Justice Victor J. Dowling, presiding judge of the Appellate Division of the Supreme Court and Supreme Court Justice McAvoy, old friends of Mr. Baldwin, sent letters of congratulation.

Included in the members of the firm present at the gathering were Willard A. Baldwin, G. B. Dorsey, George Wiltshire, and C. C. Baldwin of Baltimore.

George Eastman Awarded Medal of American Institute of Chemists

Announcement was made last Monday that the American Institute of Chemists had awarded its medal "for noteworthy and outstanding service to the science of chemistry and the profession of chemist in America" to George Eastman.

In making this announcement, Dr. Frederick E. Breithut, president of the Institute, referred to Mr. Eastman as "One of the greatest lay-scientists of the present day."

"Started as a small enterprise" he went on, "by an 'amateur photographer,' as Mr. Eastman still calls himself, the growth and development of the Eastman Kodak Co. is an industrial romance which shows the enormous possibilities of the intelligent application of chemical research to practical business."

Credit to M. A. Belkoff

Owing to an error the article "Finishing Plain and Jacquard Cotton Velours" appearing on page 29 of our issue for Feb. 15, was credited to M. A. Beckoff. This article was contributed by M. A. Belkoff.

Want Farm Board to Back Mills for Oregon Flax

SALEM, OREGON.—Possibility that a half dozen more flax mills will be established in the Willamette Valley through loans from the Federal Farm Board was announced here by Henry Meyers, superintendent of the Oregon state penitentiary, which operates the state flax mill. I. B. Bartram, superintendent of the state flax industries, has telegraphed that he appeared before the Federal Farm Board and requested a loan of $200,000 for expansion of the flax industry.

Pamphlets Tell Story of Guildmode Hosiery

Two pamphlets setting forth the story of Guildmode hosiery have been prepared by Hosiery Guild, Inc., and are ready for distribution, it is announced by Harry L. Kinne, managing director. This is part of the educational campaign recently decided upon by the organization's board of directors. One of the pieces of literature is for use in retail establishments, and the other will be used in educating the consuming public to the features of Guildmode.

Amoskeag to Have Bonded Wool Warehouse at Manchester

The Amoskeag Mfg. Co., Manchester, N. H., has obtained permission from the Federal Government to maintain a bonded warehouse for the storage of wool within its Manchester plant. This will mean a saving of thousands of dollars in rentals, Amoskeag now being forced to store its bales of wool in warehouses at Boston. The sheds designated by the government are capable of holding from 2,500 to 3,000 bales, or approximately 2,000,000 lb. of wool.

Sheeted Cellulose Finds Cotton Linters Market

Production of sheeted cotton linters has been successfully carried forward for the first few months on the new machines installed last October at the Hopewell (Va.) plant of the Hercules Powder Co. The new machines are producing a product which is finding a wide market in the viscose rayon industry.

Officials of the Virginia Cellulose Department of the Hercules company are pleased with the prospects.

Additional Glanzstoff Rayon Price

The American Glanzstoff Corp. has added to its different types of 150 denier domestic yarn produced in Elizabethton, Tenn., the following:

150/42 soft luster skeins, first quality	$1.25
150/42 soft luster skeins, second quality	1.20
150/42 soft luster unbleached cones	1.29
150/60 high luster skeins, first quality	1.35
150/60 high luster skeins, second quality	1.30
150/60 high luster unbleached cones	1.39

New Dyestuffs

Two new indigosols have been placed on the market by the Carbic Color and Chemical Co., Inc., 451 Washington St., New York. These products are said to represent a valuable addition to the line of water-soluble vat dyes in that they possess excellent all-round fastness and are much faster to light than older types of indigosols.

Indigosol Scarlet IB. is recommended for the production of light shades on mercerized cotton fabrics, and for the dyeing of rayon. Cotton-rayon fabrics are dyeing in uniform shades, and the new brand is also suitable for the dyeing of unweighted silk. In view of its good leveling properties the dyestuff may be used in combination with other suitable indigosols for the production of pale compound shades.

Indigosol Brown IRRD is a homogeneous dyestuff producting reddish brown shades suitable for self and mode shades. It is recommended for dyeing light shades on mercerized-cotton piece goods, viscose, cotton-viscose, and unweighted silk.

The Peerless Color Co. have placed on the market two new vat dyes, Hydroform Bright Yellow 3G and Hydroform Bright Orange RG. Both of these are said to be extremely fast to chlorine, washing, etc., and of good fastness to light. They are sold in paste form, very finely dispersed, and are suitable for printing as well as other work.

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Textile Patents

APPARATUS for coloring portions of yarn in mass. 1,745,097. J. S. Johnston, Utica, N. Y. Assigned to Eclipse Textile Devices, Inc., Elmira Heights, N. Y.

COLORED printed fabrics. 1,744,410. J. Morton, Cramond Bridge, West Lothian, Scotland.

DRAWING frames, device for clearing flyings, lint, etc., from. 1,745,151. T. J. Comber, Somerville, Mass. Assigned one-half to A. L. Emery, Charlotte, N. C.

FIBROUS material, means for testing the dryness of. 1,744,120. C. Q. Ives, Berlin, N. H. Assigned to Brown Co., Berlin, N. H.

FIBROUS materials, method of and means for rendering transparent or translucent. 1,744,767. A. H. Huisken, La Grange and T. L. Roman, Chicago, Ill. Assigned to Western Electric Co., N. Y. C.

KNITTED pile fabric. 1,744,327. D. P. Moore, Avon Park, Florida.

KNITTING implement. 1,744,240. M. J. Nevans, Franklin, N. H.

KNITTING machine. 1,744,789. M. C. Miller, Cumberland, R. I.

LOOM. 1,744,212. C. A. Coups, Belleville, N. J. Assigned to Eastwood Wire Mfg. Co., Belleville, N. J.

LOOMS, tuft yarn frame for. 1,744,433. C. C. Alvord, Worcester, Mass.

MANUFACTURING foils, films, ribbons and the like from viscose and similar cellulose solutions. 1,745,247. E. Czapek and R. Weingand, Bomlitz near Walsrode, Germany.

NEEDLE board. 1,745,294. J. C. Costner, Lowell, Mass.

PLATED knitted fabric. 1,744,219. C. B. Gallagher, Asbury, Park, N. J. Assigned to Standard Trump Bros., Machine Co., Wilmington, Delaware.

Pequot Mills Finds Value in Research

Creation of a new research department and enlargement of the selling organization were announced at the sales conference of Pequot Mills held this week in the offices of Parker Wilder & Co., New York, selling agents of the mills.

Ernest N. Hood, treasurer, in addressing the conference, declared that Parker, Wilder & Co. is extending its service to cover new fields and that the firm is establishing a research department to supplement the work along these lines, already conducted by the mills. "During the last year," he said, "more than $50,000 was spent by Pequot Mills in research and we propose to continue our efforts.

"The longer length sheet," continued Mr. Hood, "made further gains in popularity during last year. One large retailer has announced that he proposes to concentrate his sales efforts this year on the 108-inch length."

J. Foster Smith, agent of the mill, J. D. Tarcher and W. D. Judson, President of Parker, Wilder & Co., also addressed the conference.

Deferment Asked on Higher Australian Silk Hosiery Duties

Deferment of the application of the increased import duties on full-fashioned silk hosiery, which became effective on Nov. 22, 1929, until local plants are able to catch up on orders which are said to be three or more months behind, has been petitioned by the Australian Retail Traders Association to the Australian Government, according to a radiogram received in the Department of Commerce from Trade Commissioner Hiram T. Nones, Sydney.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended Feb. 15, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

	Week Ended Feb. 15	Totals to Date 1929	Totals to Date 1928
Domestic	260,000	11,535,000	8,600,000
Foreign	1,398,000	12,074,000	25,378,000
Total	1,658,000	23,609,000	33,978,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,398,000	12,074,000	25,378,000
Philadelphia	1,083,000	13,512,000	13,404,000
New York	438,000	7,636,000	13,424,000
Total	2,919,000	33,222,000	52,206,000

Burlaps Inactive and Show Few Price Changes

Bearish sentiment on the burlap exchange increased at mid-week due to declines on the Calcutta market.

The 8 oz. 40s for spot and two weeks arrival were quoted at 5.40c.; February shipment, 5.35c. The 10½ oz. 40s for spot and two weeks arrival were at 6.75c.; February shipment, 6.65c.

Business News

Scott & Williams Co. Purchases Standard-Trump Co.

Scott & Williams Co. announces the purchase of the Standard-Trump Bros. Machine Co. of Wilmington, Del. Present plans call for the continuance of the Standard-Trump Bros. Machine Co. as heretofore for an indefinite period.

It is pointed out that this is not Scott & Williams, Inc., but Scott & Williams Co., which is not incorporated. A detailed story of the purchase of Standard-Trump Bros., which has been an outstanding company in knitting machinery manufacture for many years, will appear in next week's issue.

T. B. Wood's Sons Licensed to Make and Distribute Texrope Drives

T. B. Wood's Sons Co., Chambersburg, Pa., has entered into an agreement with the Allis-Chalmers Mfg. Co. wherein the former becomes licensed manufacturers to make, sell or use genuine Texrope drives. The firm has been appointed special distributor to carry at Chambersburg a large and complete stock of standard sizes of sheaves, bushings and belts.

Sheaves for special drives will be made to order and will conform to Allis-Chalmers' standard of design and quality. The plant has just been thoroughly equipped to manufacture sheaves for V-belt drives.

New Shade Card for Amanil Colors

The American Aniline Products, Inc., has recently issued a shade card entitled "Amanil Colors on Bleached Cotton Cloth." This book includes methods for dyeing, dissolving, diazotizing, and developing Amanil colors, and complete index of fastness to washing, light, and acid. It also describes the Amanil colors leaving silk effects white and leaving acetate-rayon effects white. In addition to showing a complete table of how the Amanil colors are affected by iron, copper, and monel metal, a complete set of Amanil developed colors is included and a table showing the dischargeability of the products above mentioned.

DeVilbiss Expands on West Coast

Increasing volume of business in Southern California territory is the reason for the establishment of a new and thoroughly complete sales and service branch by the DeVilbiss Co. at 2305 East 8th Street, Los Angeles, Calif. R. J. Burns is manager of the new Los Angeles branch. The DeVilbiss Co. manufactures and sells spray-painting and spray-finishing outfits and equipment for all industries and uses, exhausting equipment, air compressors, and air and fluid hose.

Procter & Gamble Make Record in Profit Sharing Dividends

Over $800,000 in profit-sharing dividends was paid or credited during the year 1929 to employees of the Procter & Gamble Co., located in plants and offices throughout the United States and Canada, according to an announcement made by officials of the company. This sum, according to the announcement, is the largest ever distributed among the workers as their share

of the company's profits for a single year.

The employes who are members of the company's profit sharing plan either own outright or have subscribed for 226,900 shares of common stock, having current market value of over $15,000,000.

Morris With C. E. Wunder Organization

Lindsay Morris identified with textile architecture and engineering circles in the eastern states has become associated with Clarence E. Wunder organization, 1520 Locust St., Philadelphia, architects and engineers.

Arizona Chemical Co. to Work Large Salt Deposits

Announcement is made of the formation of the Arizona Chemical Co. to take over the natural salt cake (sodium sulfate) deposits near Clarkdale, Ariz., formerly operated by the Sodium Products Corp.

The Arizona Chemical Co. will be operated by the Kalbfleisch Corp., New York City. The sale of its products will be handled jointly by the Kalbfleisch Corp. and A. Klipstein & Co.

Extensive alterations and additions to the present equipment will be made, and it is expected the plant will be in operation by April 1.

W. B. Lawson Elected Vice-Pres. of Harshaw Chemical Co.

At the annual meeting of the Harshaw Chemical Co., Cleveland, Ohio, held on Feb. 6, William B. Lawson was elected a director and at the organization meeting of the board of directors held Feb. 7, he was elected a vice-president. Beginning at once, Mr. Lawson will become active in the affairs of the Harshaw Chemical Co.

For many years Mr. Lawson has been connected with the International Nickel Co. with headquarters in the executive offices, New York City.

Chicago Bridge & Iron Co. Buys Birmingham Plant

The Chicago Bridge & Iron Co., manufacturer of steel tanks and steel plate work, has purchased the Reeves Bros. Co. plant at Birmingham, Ala. It is located on a 40-acre tract, which was included in the purchase, and has a capacity of 4,000 tons per month.

This plant will be used by the Chicago Bridge & Iron Works to fabricate steel for erection at southern points, for shipment to the Pacific Coast by water and as additional facilities for handling export work.

Haubold Textile Machinery Exhibit Wins Grand Prize at Barcelona

C-G Haubold A-G, of Chemnitz, Germany, manufacturers of textile machinery, have been awarded the Grand Prize for their machinery exhibit at the International Exhibition at Barcelona, it is learned. Announcement of the award was received by the Haubold company from the German General Commissioner at Barcelona, who had been notified of the decision of the International Jury judging exhibits at the exposition.

The Haubold exhibit was inclusive and covered a wide range of textile machinery equipment. It dealt mainly with weaving, spinning and drying machinery with horizontal chain gear, new electrical single drive with pressure head carriage and other new features. One item which attracted attention was a modern centrifugal pendulum with pressure head regulator, chronometer and brakes.

W. E. Pashley now Second Vice-President of C. F. Pease Co.

W. Earle Pashley, advertising manager of the C. F. Pease Co., makers of blueprinting machinery, Chicago, Ill., has been appointed assistant sales manager and second vice-president. Simultaneous with that appointment Mr. Pashley was elected to the board of directors and in addition to his new responsibilities will continue in charge of advertising and all promotional activities of the company.

Foxboro Expands Its Los Angeles Office

The Foxboro (Mass.) Co., indicating and recording instruments, announces the removal of its Los Angeles office to 2307 East Eighth Street, Los Angeles.

This office has been reorganized for the purpose of assuring southern California the same Foxboro engineering service enjoyed by other sections of the country. Dudley M. Hill will be in charge, assisted by an entirely new staff of trained and experienced engineers.

Overnight Service on Chain Drives Started by Link-Belt

The Link-Belt Co., Indianapolis, Ind., for over 50 years a manufacturer of power transmission and materials handling equipment, has arranged for the "stocking" of Link-Belt roller chain drives (the two wheels and the chain) by local distributors, on about the same basis as the silent chain drives have been stocked for the last six years.

Cutler-Hammer Moves Detroit Office

Effective Feb. 10 the Detroit district sales office of Cutler-Hammer, Inc., electric control apparatus, will be located at 2755 East Grand Boulevard, Detroit, Mich.

The new location includes warehouse facilities, where stocks of standard C-H motor control, wiring devices, safety switches and other C-H products will be carried for immediate delivery.

S. B. Taylor now Assistant Works Manager of Reliance Electric

S. B. Taylor has been recently promoted to assistant works manager of the Reliance Electric & Engineering Co., Cleveland, Ohio. He began work with this company in 1925 as design engineer of alternating current motors. In 1928 he was advanced to engineer in charge of drafting.

Southern Chemical Co. Re-elects Its Officers

Officers and directors were re-elected at the annual meeting of the Southern Chemical Cotton Co. at Chattanooga, Tenn., recently. The company prepares cotton for the manufacture of various articles by other companies.

G. P. Thomas Joins Rucker & Heinen, Inc.

G. Percival Thomas, formerly with the American Dyewood Co., has associated himself as a general partner with the firm of Rucker & Heinen, Inc. The firm will hereafter be known as Rucker, Heinen & Thomas, Inc., Dyewoods, anilines, tanning materials, Paterson, N. J.

Obituary

James Alexander Odell

James Alexander Odell, textile manufacturer, banker and retired merchant of Greensboro, N. C., died recently in that city at the age of 89. In 1884 he built the Durham Cotton Mill, and successfully operated it for several years. Subsequently he founded the Odell Manufacturing Co., at Bynum, N. C., which is now operated under the firm name of the J. M. Odell Manufacturing Co., and was its president until his death. He was also connected with the Odell Manufacturing Co., of Concord, which was later discontinued, and for a number of years was director of the Kerr Manufacturing Co., now the Kerr Bleaching and Finishing Co., of Concord.

William Walton

William Walton, former vice-president of the Rockford (Ill.) Mitten and Hosiery Co., died in that city Feb. 11. Born in Yorkshire, England, in 1844, he was educated in the common schools there, and early served his apprenticeship in the spinning mills. He came to the United States in 1874, and after being employed in the Washington Mills at Lawrence, Mass., and as superintendent of the P. C. Garrett Mills at Philadelphia, went to St. Charles, Mo., where he conducted the small mill founded by William Zioch, which subsequently removed to Rockford, Ill., and was incorporated as the Rockford Mitten and Hosiery Co. He is survived by three daughters.

Robert Ritchie

Robert Ritchie, founder of R. J. & R. Ritchie Co., Philadelphia, died at his home Feb. 12 at the age of 76 years. He served as secretary and treasurer of the concern which bears his name until he was forced to retire because of ill health. Mr. Ritchie was identified with the textile industry for many years, being one of the pioneer textile manufacturers of Frankford. He was born in Scotland in August 1953, and was a member of the Manufacturers Club, Penn Club, St. Andrews Society and was active in affairs of the Bethlehem Presbyterian Church. Surviving him are his widow, two sons and two daughters.

Walter Marshall Grayson

Walter Marshall Grayson, George S. Grayson & Sons Co., Darby, Pa., died from heart failure at his home in Drexel Hill, Pa., a suburb of Philadelphia, Feb. 12 at the age of 56 years. Mr. Grayson and his brother operated the yarn plant which was started by their father. He was well known in the woolen and worsted yarn trade.

John J. Hoey

John J. Hoey, president and treasurer of the Hoey Mfg. Co., Inc., Providence, R. I., manufacturers of textile machinery, died Feb. 5 at his home 97 Linwood Avenue, Providence. Mr. Hoey was 82 years of age and came to Providence 46 years ago. He founded the Hoey Mfg. Co. in 1910 and has been head of the company since.

Herman Johl

Herman Johl, president of Max Pollack & Co., Inc., New London, Conn., died Feb. 14 following a heart attack at his home, Trial's Corner, Groton, Conn. Mr. Johl was 67 years of age and had long been connected with the thread manufacturing industry.